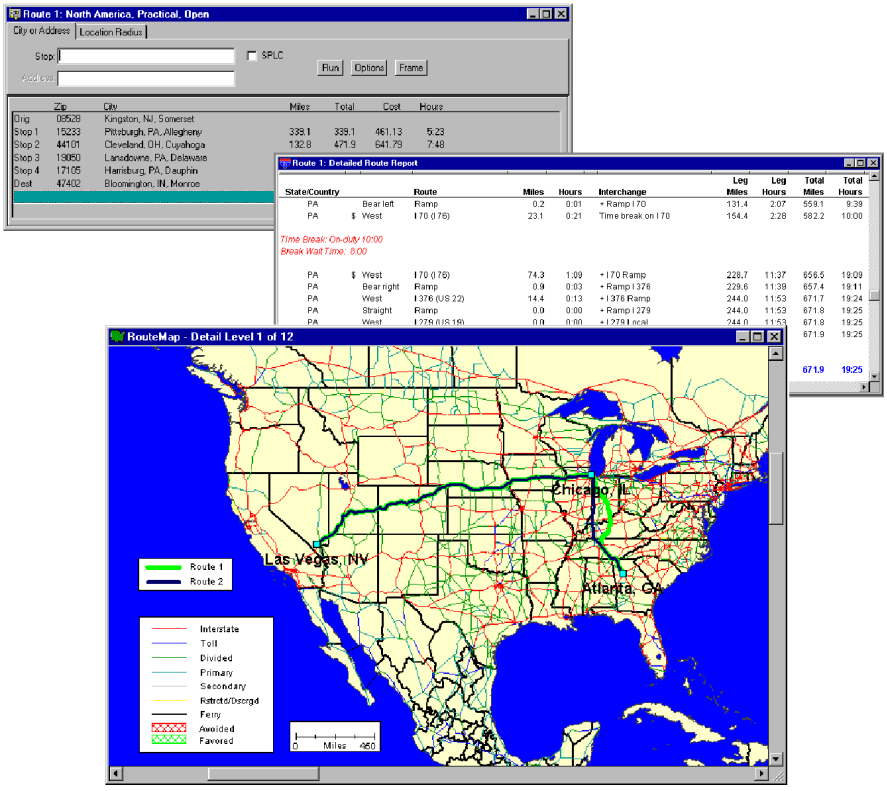
PC*MILER®

Version 17

Routing, Mileage and Mapping Software

USER'S GUIDE



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10. Warranties: ALK represents and warrants that:

A. For ninety (90) days from date of purchase, PC*MILER, when delivered and properly installed, will function substantially according to its specifications on a computer purchased independently by you.

B. For ninety (90) days from date of purchase, the software media on which ALK provides PC*MILER to you will function substantially free of errors and defects. ALK will replace defective media during the warranty period at no charge to you unless the defect is the result of accident, abuse, or misapplication of the product.

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11. Disclaimer: PC*MILER's suggested routings are based on official highway maps, the Code of Federal Regulations, and information provided by state governments. They are provided without a warranty of any kind. The user assumes full responsibility for any delay, expense, loss or damage that may occur as a result of their use.

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B. If you materially breach any terms, conditions, use limitations, payment obligations, or any other terms of this Agreement.

C. Upon expiration of any written supplemental license agreement between you and ALK of which this license is a part.

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15. Miscellaneous: This Agreement shall be construed and applied in accordance with the laws of the State of New Jersey. The Courts of the State of New Jersey shall be the exclusive forum for all actions or interpretation pertaining to this Agreement. Any amendments or addenda to this Agreement shall be in writing executed by all parties hereto. This is the entire Agreement between the parties and supersedes any prior or contemporaneous agreements or understandings. Should any provision of this Agreement be found to be illegal or unenforceable, then only so much of this Agreement as shall be illegal or unenforceable shall be stricken and the balance of this Agreement shall remain in full force and effect.

1.0 INTRODUCTION

Congratulations! By purchasing a PC*MILER product, you have made a cost-effective investment in a high quality software package that's simple to learn and easy to use.

Before you go any further please read the License Agreement that starts on page i. It details the terms under which ALK Technologies, Inc. grants you a license, ALK's copyrights, and your rights as a licensee.

YOU MAY MAKE ONE COPY OF THE CD-ROM **FOR BACK-UP PURPOSES ONLY**. THE SOFTWARE LICENSE CONTAINED IN THIS MANUAL LIMITS THE NUMBER AND TYPE OF COMPUTER ON WHICH YOU CAN LEGALLY USE PC*MILER. BY OPENING AND USING THE PC*MILER CD-ROM, YOU HAVE ACCEPTED THE TERMS AND CONDITIONS OF THE LICENSE AGREEMENT. ALK TECHNOLOGIES, INC. WILL TAKE PROPER LEGAL ACTION AGAINST ANY ILLEGAL USE OF THE PC*MILER SOFTWARE.

⇒ **NOTE:** This manual contains instructions on how to use PC*MILER|HazMat. However, PC*MILER|HazMat is not included with the purchase of PC*MILER; it is a separate add-on module that can be purchased directly from your sales associate.

1.1 What is PC*MILER?

PC*MILER generates point-to-point mileages, routes, and driving instructions over complete highway systems in North America, Puerto Rico, Bermuda, and Greenland.

PC*MILER will calculate an unlimited number of routes and mileages on a single personal computer or a network installation.

PC*MILER calculates point-to-point mileages for an origin-destination pair of locations with intermediate stop-off points. PC*MILER provides leg and cumulative mileages, time and cost estimates, state\country distance summaries, and Practical, Shortest, National Network, Toll Discouraged, or 53’ Trailer mileages over the entire North American truck-usable highway network.

PC*MILER includes the following major features:

- ***NEW!*** **Location Radius** tool lets you search for all cities, ZIP and postal codes, towns, points of interest, and custom points within a specified mileage radius around any location

- Ability to customize routes to avoid, favor, or override specific road segments; create and manage multiple sets of preferences
- The complete North American highway network that includes the United States, Canada, and Mexico plus Puerto Rico, Hawaii, Bermuda, and Greenland
- County name designations for all US locations
- Ability to save and simultaneously view multiple reports for routing, mileage, fuel tax, etc.
- Reports and maps that can be exported via clipboard for use with spreadsheet, word processing and database software
- Multiple route generation with on-screen comparison to determine best route
- Ability to customize place names to conform to the name of your facilities and customer locations
- RouteMap™, "the electronic road atlas" that generates map quality graphics
- Ability to point and click on the map to select origin, stop-offs and destination
- A time-saving “drag and drop” feature that lets you copy stops from one route entry window to another
- Mouse-driven map customization
- Ability to enter custom cost\time estimates for empty or loaded miles
- A Border Wait Time option that takes into account expected delays at international border crossings (affects time estimates and appears on reports and driving instructions)
- Hub mode determines routing, total mileage and state mileage summaries from a central origin point to unlimited destinations
- Unlimited number of stop-off locations
- Optimal sequencing of stop-offs
- DOT hours of service breaks included in driving instructions
- State\Country mileage summaries including ferry miles
- Latitude\Longitude routing that generates point to point routes and mileages between Lat\Long coordinates
- Automatic saving of map and window workspace settings
- Speed limits by state and province
- Easy to use, comprehensive on-line Help
- U.S. Department of Defense compliance

1.2 What can PC*MILER be used for?

You can use PC*MILER for:

- Mileage calculations for Shortest, Practical, National Network, Toll Discouraged, and 53' Trailer Routes
- Dispatching\Routing
- Driver pay
- Rate determination
- Instant customer quotes
- Fuel tax reporting
- Trip time and\or cost estimation
- Empty and loaded mile reporting
- Sequencing stop-offs in optimal order
- Freight bill auditing
- IFTA and IRP auditing
- FHWA safety auditing
- Hazardous material routing
  *(PC*MILER|HazMat, available as an add-on data module)*

1.3 What's New in PC*MILER Version 17?

Version 17 includes the following new features and enhancements:

- **Location Radius** – For rate determination and pre-operation planning, a new location radius tool lets you search for all cities, towns, ZIP and postal codes, points of interest, or custom points within a specified mileage radius around any location.
- **Updated Trip Options** – Either Practical or Shortest routing can now be combined with other available PC*MILER routing options (Toll Discouraged, National Network, or 53' Trailer).
- **Enhanced 53' Trailer Routing**: ALK's data team has spent the past year gathering new and updated sources for our 53' Trailer routing attributes. Version 17 includes comprehensive coverage throughout the continental United States.
- **Better Map Display and Printing** – Points of interest such as truck stops, restaurants, and all your custom places are now automatically displayed in the RouteMap window at zoom level 11 and 12. Additionally, state boundary lines now stand out more clearly on the map, and a default landscape print setting makes printing a breeze.
- **Improved Avoid\Favor Routing** – In addition to the ability to include whole roads or entire jurisdictions in road preferences, each avoided

link is now effectively treated as a "closed" road unless it's the only road that can get you to your destination.

- **Weight Restrictions** – PC*MILER now makes full use of weight restriction data, where available, in route calculations. Weight restrictions have been added to the Detailed Route Report and can be applied or overridden like other truck restrictions.
- **Enhanced Driving Directions –** Turn instructions such as "Bear right" and "Straight" have been added to the directional information, and exit numbers appear in place of "Ramp" where available.
- **Cost Per Mile Update** – The default cost per mile value has been changed from $1.10 to $1.36.
- **Simplified Installation & Registration:** Installing and registering your PC*MILER software is a simple process with ALK's new web-based licensing and a Product Key given at the time of purchase.

Plus…

- **Database Enhancements**:
  - Canadian Postal Code enhancements include an update of NF (Newfoundland and Labrador) codes to NL;
  - Enhanced 53' Trailer routing;
  - 6,300 updated Truck Stops from Comdata's GeoFUEL network and Zenrin USA, Inc.;
  - All year-2003 five-digit US ZIP codes;
  - Complete update of all 13'6" height restrictions;
  - Full integration of weight restrictions in route calculations and driving directions;
  - All Interstate-to-Interstate highway exits now included, plus all Interstate-to-non-Interstate exits except A\B suffixes;
  - Updated county name (or equivalent) designation for every location;
  - PLUS thousands of additional North American road miles, SPLC's, and Canadian Postal Codes. (SPLC's and CanPosts are available as add-on data modules.)

1.4 The PC*MILER® Family of Products

PC*MILER is part of the PC*MILER family of products, which includes:

PC*MILER®|Streets is the first-ever commercial street-level routing, mileage and mapping software. It includes all the features and functionality of PC*MILER, with the underlying road network containing an

enhanced U.S. street-level network. It automatically provides precise turn-by-turn directions and drive times between 100 million U.S. addresses. PC*MILER|Streets can maximize operational efficiencies with user customized street-level routing preferences, unlimited stop optimization within ZIP codes and cities, and map quality graphics that enable you to visualize operations at the street level.

PC*MILER®|Worldwide generates point-to-point distances between locations in North America, South America, Europe, Africa, Asia, and Oceania. The PC*MILER|Worldwide database includes over 1 million named locations and over 6.6 million kilometers of truck-usable road segments. PC*MILER|Worldwide generates exact US Department of Defense distances for freight and household goods billing.

PC*MILER®|HazMat generates point-to-point routes, distances, and driving instructions over North America. It contains all the features of PC*MILER, plus the ability to generate routes constrained by US federal, state, and local hazardous materials restrictions. PC*MILER|HazMat enables users to run Practical, Shortest, National Network, 53' Trailer, and Toll Discouraged routes for the following types of hazardous materials: *General*, *Explosives*, *Inhalants*, and *Radioactives*.

PC*MILER®|FuelTax fully automates all aspects of fuel and mileage tax tracking, calculation and reporting for motor carriers, private fleets and owner\operators. Its unique seamless PC*MILER interface generates state mileage summaries within the on-line trip sheet. PC*MILER|FuelTax can also be used to generate post-operations analysis reports to identify fuel purchase\ trip conflicts, perform a self-audit, and identify gaps for more efficient operations.

PC*MILER®|Spreadsheets generates point-to-point mileages and drive times within spreadsheet software. PC*MILER|Spreadsheets provides instant mileage calculations to assist in price quotes, driver pay, load matching, billing, driver log auditing, lane analysis, rate negotiation, bid preparation, logistics analysis, strategic planning, freight cost analysis and freight bill auditing.

PC*MILER®|Mapping enhances PC*MILER by adding the ability to display routes and geographical data on maps for real time dispatch and operations analysis. Spreadsheet and database software users are able to plot data as icons, lines and customized routes from data within Microsoft® Excel® and Microsoft Access®. Software developers can also include PC*MILER|Mapping commands in their own custom applications. PC*MILER|Mapping lets users:

- Visualize geographic relationships in your data

- Integrate PC*MILER functionality into a Web-based software solution
- Integrate real-time maps into your dispatch operation
- Create "what-if" scenarios for complicated logistics problems
- Track equipment location and status in real time
- Display detailed fleet and facility data in a pop-up window with a click of the mouse
- Customize icons and colors on the map to differentiate your data

PC*MILER®|BatchPro is an optional add-on batch processing module for PC*MILER that can read\write ASCII text files. PC*MILER|BatchPro allows PC*MILER to be integrated with most transportation and logistics management systems. It also permits the simultaneous processing of large volumes of origin\destination pairs, entered as city\state combinations, ZIP codes, or latitude\longitude points. PC*MILER|BatchPro offers exceptional speed, ease of use, and flexibility and can be integrated with standard database and spreadsheet software.

PC*MILER®|Connect offers transportation professionals and software developers access to the full range of PC*MILER routes, mileages and reports, including driving times, state-by-state mileages, detailed driving instructions and stop optimization. It is designed to fulfill all the routing and mileage reporting needs of Windows-based transportation and logistics management software systems. PC*MILER|Connect can also be used to integrate PC*MILER functionality into a Web-based software solution.

PC*MILER®|TCP/IP software gives transportation professionals and software developers a way to interact with PC*MILER Connectivity (DLL) Products running on Windows over a TCP/IP network from any other computer platform.

PC*MILER®|Rail is the only North American railroad routing and mileage software. It includes 210,000 miles of rail line, 53,000 freight stations and over 580 railroads. PC*MILER|Rail Connectivity Products also allow full integration of PC*MILER|Rail routing and mileage information with your transportation and logistics management software systems.

SPLC and **Canadian Postal Code** add-on modules are also available for use with PC*MILER. These modules enable PC*MILER users to enter SPLC's and Canadian place names as stops on a route.

CoPilot® Truck is an in-vehicle GPS navigation and route guidance system for professional truck drivers. CoPilot Truck provides voice-

prompted, dock-to-dock driving directions to any U.S. nationwide address with instant route updates and detours to avoid traffic and construction. The software comes in two versions to accommodate both laptop and Pocket PC users.

PC*MILER®|FleetCommander™ is a sophisticated fleet tracking and optimization system designed to enhance customer service and cut expenses. PC*MILER|FleetCommander provides instant access to truck locations, delays and OoR information, and a map display with clickable icons for detailed information. Its state-of-the-art features also include color-coding of truck and load icons; reports that can be printed, e-mailed, or sent to vehicles; and data export to HTML format for sharing information over the Internet.

eMILER.com is the on-line routing, mileage, and mapping service that enables users to take advantage of the power of ALK's PC*MILER software via the Internet. It can be used to generate truck-usable routes, maps, and driving directions across North America quickly and cost-effectively.

1.5 How does PC*MILER generate mileages and routes?

Following is a description of the PC*MILER database, and how the program calculates distances and routing.

1.5.1 Database

All PC*MILER products are based on ALK Technologies' proprietary computer representation of the North American highway system. The mileages contained in PC*MILER are derived from official State highway maps, State DOT maps, county maps, local maps, and information received from thousands of industry contacts.

All Interstate, Federal and all truck-usable State highways are included. The present North American Network contains over **738,000 miles of highway** throughout the United States, Canada, and Mexico including over 16,600 additonal miles of highway **access ramps**. It contains approximately **310,000 accessible locations** which allow PC*MILER to generate billions of origin-destination mileages and route listings.

These locations include all year-2003 US 5-digit **ZIP codes**, as well as approximately 1,700 **state border crossings**, 6,300 newly updated **truck stops**, 850 US Department of Defense **military installations**, 775 **CAT**

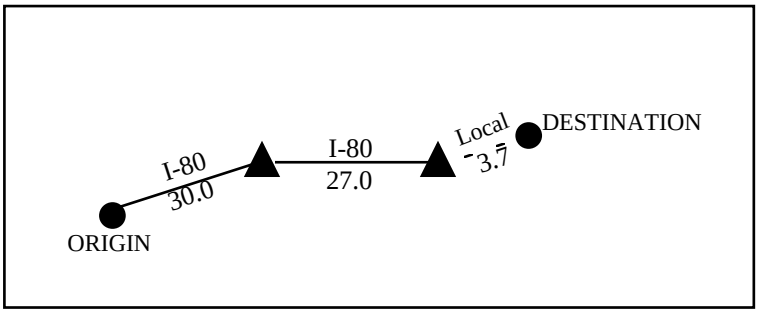
Weigh Scale locations, all **highway junctions** and more than **303,800 cities, towns, and points of interest**.

ALK also offers separate add-on data modules containing over **772,580 six-digit Canadian Postal Codes** and more than **112,500 SPLC Codes**.

1.5.2 Distance Calculation

Distances and routing directions are calculated by first determining which roads a vehicle will travel over to get between two points and then adding up the distances over each section of road to arrive at a total mileage, similar to the manual task that one might follow if using an atlas.

Exact distances and driving instructions are generated if both origin and destination points are Key Cities on the ALK Highway Network. If one of the points is not a Key City, then the nearest Key City, in the direction of the other point, is selected to calculate the exact portion of the trip using actual roads. A distance estimation for the local portion of the route is then calculated. This distance is generated from the chosen Key City to the geographic center of the non-Key City point and added to the total distance.



Due to the large number of Key Cities (at least one per county), the local portion of any mileage calculation is usually a very small percentage of the total distance.

1.5.3 PC*MILER Route Types

PC*MILER now offers two basic route types, Practical and Shortest, that may be combined with one or more of the other three route types that PC*MILER users are familiar with (Toll Discouraged and National Network or 53' Trailer Routing). These five PC*MILER route types are described below in sections 1.5.4 – 1.5.8.

1.5.4 PC*MILER Practical Routes

PC*MILER Practical Routes represent distances and driving routes that a driver would normally take to minimize time and cost. Practical Routes model the trade-off between taking the most direct path and staying on major, high quality highways. Interstate highways are given a higher priority than toll roads, which in turn are given a higher priority than secondary highways, and so on. Routing instructions and mileages can be used when actual travel distances and directions are needed.

PC*MILER Practical routings consider distance, road quality, terrain, urban\rural classifications, truck-restricted roads, and designated principal and secondary through routes.

PC*MILER Practical Route mileages and state-by-state mileage breakdowns can be used to supplement your regular fuel tax reporting documents for many states. Many state audit departments have purchased licenses to incorporate PC*MILER into their audit procedures.

⇒ **NOTE: A PC*MILER user may still be assessed additional taxes even by those states using PC*MILER in their audit procedures.** However, your chances of being assessed additional taxes greatly diminishes by utilizing a computerized mileage system in conjunction with your driver logs, trip sheets, invoices, and bills of lading.

In order to minimize the possibility of significant tax assessments, you must verify that the PC*MILER-generated route is the *same* as that reported on your driver logs and\or trip sheets. In addition, the carrier must add the appropriate vicinity miles to the PC*MILER generated mileages so that the following equation is true:

TOTAL ODOMETER MILES = PC*MILER Miles + Vicinity Miles

⇒ **NOTE:** PC*MILER accounts for some vicinity miles if non-Keypoints (generally ZIP code locations and\or place names not associated with the downtown metropolitan area) are used as stop-off locations.

ALK Technologies continues to work closely with the member states of the International Fuel Tax Agreement (IFTA) and the International Registration Plan (IRP). Currently there are over 40 IFTA\IRP states using PC*MILER as an auditing tool in their fuel and mileage tax audit procedures.

1.5.5 PC*MILER Shortest Routes

PC*MILER Shortest Routes represent distances and driving routes that a vehicle would take to minimize total distance traveled while still following a reasonable route. For instance, Shortest Route mileages and routes will also avoid truck-restricted roads and, in some cases, may favor a beltway rather than travelling directly through a city.

ALK maintains that carriers and shippers alike would all be better served by using a mileage tariff based on *actual miles traveled* (i.e. similar to those generated using the PC*MILER Practical Route option), which would more accurately reflect true transportation costs.

1.5.6 PC*MILER National Network Routes

The National Network is a government-designated system of highways originally established by the Surface Transportation Assistance Act of 1982. This routing option is based on the federally-designated National Network system updated in the April, 1992 Code of Federal Regulations, Part 658, Appendix A. The National Network includes the Interstate System (several minor segments are not included), and many selected US and state highways. Highways continue to be added to the National Network by federal and state governments.

PC*MILER National Network routing represents distances and driving routes which are most reasonable and legal for the larger trucks authorized by the Surface Transportation Assistance Act of 1982.

National Network routing stays on the National Network **to the maximum extent possible**. Given that many areas are not directly served by the National Network, the origin and stop-offs of your route may not be on the National Network. In these cases PC*MILER will take the shortest reasonable path from the origin and stop-offs to the Network. PC*MILER National Network routing will flag with a question mark (?) any road segments not designated as National Network in the detailed route report. Those road segments should be checked before travel.

National Network mileages tend to be higher than Shortest or Practical mileages.

These designated highways permit, at a minimum, 102" wide, single 48 ft. trailers and tandem 28 ft. trailers. The Interstate system and most, **but not all**, remaining designated routes are open to 80,000 pound vehicles. Certain states, notably Arkansas and Mississippi, have designated certain National Network segments with less than an 80,000 pound capacity.

In addition to the National Network highways, *access routes* and *access policies* are components of routing STAA dimensioned trucks. The Federal government has mandated that no state may prohibit travel from the National Network for a minimum of one road mile unless safety restrictions apply. Additionally, no state may deny reasonable access to terminals and facilities for food, fuel, repairs and rest.

Several states maintain more generous access policies and lists of specifically designated access routes to terminals and facilities. (See Appendix A for the current status of access policies. For detailed information about pre-approved access routes, contact the individual states). Should you need to travel beyond the National Network and beyond the access roads, you must acquire the proper permit.

⇒ **NOTE:** These suggested National Network routings are based on official highway maps, the Code of Federal Regulations, and information provided by state governments. It is provided without a warranty of any kind. The user assumes full responsibility for any delay, expense, loss, or damage which may occur as a result of its use.

⇒ **Also NOTE:** There are no National Network road segments in Mexico and Canada.

1.5.7 PC*MILER 53' Trailer Routing

Because every mile equals money, PC*MILER now offers enhanced routing specifically for 53' trailers. The calculations for these routes are based on National Network routing, with the addition of roads that permit 53' trailers.

1.5.8 PC*MILER Toll Discouraged Routes

For carriers who desire to avoid long stretches of toll roads, ALK provides a Toll Discouraged routing option. Toll Discouraged routing will avoid long stretches of toll roads but will not take long, impractical detours to avoid toll bridges and tunnels. For example, a routing from Boston, MA to Albany, NY will avoid the Massachusetts Turnpike, but a routing from Camden, NJ to Philadelphia, PA will include a toll bridge.

1.6 How do I file PC*MILER-based tariffs?

The ICC Termination Act of 1995 has eliminated tariff filing requirements for motor carriers. Therefore, by simply owning a legal copy of PC*MILER you may use the mileages contained therein for your rate determinations.

There is no need to participate in a mileage tariff and therefore no need to file a Power of Attorney.

⇒ **NOTE:** There may be some federally mandated filing requirements if there are joint motor-water rates and shipments that involve going to or from non-contiguous U. S. states or territories.

1.7 About This Manual

This manual is divided into seven parts. Part 1 is a general introduction to PC*MILER. Part 2 gives general installation instructions and other information about getting started.

Part 3 details the basic operation of PC*MILER. Part 4 describes all the special additional features found in PC*MILER. Part 5 describes how to use the RouteMap window for graphic display of generated routes. Part 6 contains information about PC*MILER technical support and updates. Part 7 gives you a general introduction to ALK Technologies, Inc.

2.0 GETTING STARTED

Before installing PC*MILER, please make sure that you have the proper hardware and software configuration needed to run the program.

2.1 System Requirements

- IBM or IBM-compatible PC with a minimum Pentium II 266 MHz processor (400 MHz recommended)
- PC/LAN Windows® (98, 2000, NT®, Me, and XP) Citrix Metaframe and Windows Terminal Server
- 64 MB RAM minimum, 128 MB recommended
- Hard Disk: At least 402 MB of available hard disk space. More space needed with add-on modules as follows:
  Canadian Postal Codes – Add 75 MB
  Standard Point Location Codes (SPLC) – Add 75 MB
- Printer (optional)

All PC*MILER software, databases and auxiliary files are provided on the PC*MILER installation CD.

2.2 Installing PC*MILER

PC*MILER 17 now incorporates optional web-based license activation!

The installation includes a Product Key Code (which replaces the old Registration Code) that unlocks all products to be installed. At the end of the installation, you must license and activate the installed products. If you have an **Internet connection** and a valid **E-mail address**, you can connect directly to ALK's website to receive your Activation Code in seconds. Or you may prefer to call or e-mail our Technical Support team to receive this code.

Either way, follow the simple steps below to install PC*MILER along with any additional PC*MILER products that were purchased.

2.2.1 Single User Local Installation

1: First start Windows, then place the **Installation CD** in your CD-ROM drive and the installation will start automatically. If it does not start automatically, click the Windows **Start** menu, then **Run…**,

then type "d:\setup.exe" and click **OK**. (If your CD-ROM drive is not your D drive, substitute the letter that designates your CD-ROM drive).

2: After accepting the terms of the License Agreement, enter your **User Name** and **Company Name**. Click **Next** when finished.

3: Enter your **Product Key Code**. You should have received this code via e-mail at the time of purchase. When entering the Product Key Code, dashes are not required – dashes, spaces, or no spaces are all acceptable. Click **Next** when ready.

4: Now you will be asked to select which products to install. Check the ones you want.

Below the list of products, you will see the **Destination Folder** where PC*MILER will be installed. If you decide to install to a different location, click **Browse** to select a directory. Be sure to add "PMW170" or another directory name to the end of the new path; for example, "C:\Program Files\Pmw170". If you don't, PC*MILER will install to the root of the specified directory.

Click **Next** when ready.

5: When asked if you would like to "Share single user license over network?", select the **Single PC** option, then click **Next** to proceed with the installation. (For a network installation, see section 2.2.2 below.)

6: You must have an ALK Activation Code to access your PC*MILER software once it is installed. The final installation screen will include an **Activate license** check box. Leave the box checked to activate the ALK License Manager. **The ALK License Manager gives you direct access in seconds to ALK's activation web site** where you'll receive your Activation Code.

If you choose to receive your Activation Code via the internet at a later time, simply start your unactivated PC*MILER application and the License Manager will pop up. Or you can open the Windows Start menu and select *Programs > PCMILER 17 > License Status.*

Alternatively, you can call ALK's technical support team from 8:30am to 5:30pm, Monday to Friday, at **609-683-0220, ext. 301** or **303** OR e-mail us at activate@alk.com (include your Product Key Code and License Number) to receive an Activation Code.

When the installation and activation are complete, you can start PC*MILER from the Windows Start menu or by double-clicking the **PCMILER 17** icon on your desktop. To use the Start menu, click **Start** and select *Programs > PC*MILER 17 > PCMILER 17*.

If you are upgrading from an older version of PC*MILER, **be sure to delete the older version** after installation of the new version is complete. The older version will be in a different folder. After installing the new version, delete all files from the old installation folder, or run the uninstall program on your PC if it is available (look in the **Control Panel** for **Add\Remove Programs**).

2.2.2 Network Installation

Follow Steps 1-4 for installing PC*MILER on your hard drive (section 2.2.1), but select your network drive instead of the hard drive when indicating where you want the program installed. Make sure that you have write permission to the directory you want to install to.

At Step 5, choose **Share over network** and click **Next**. You will be asked to enter a UNC path. If you don't know this path, the installation will try to determine it for you. Follow the instructions.

After installing PC*MILER to the network drive, you'll need to run **Setup** on each individual PC or workstation. To do this, in the Windows Program Manager, choose *Run* from the File menu and enter the path to your PC*MILER setup.exe on the network.

The **Setup** program will add a "PC*MILER 17" group to the Program Manager and copy the minimal files required to run PC*MILER to your hard drive.

2.2.3 Adding New PC*MILER Products

You may find that you want to purchase an additional PC*MILER product sometime after the initial installation of PC*MILER. (For example, you might need the Canadian Postal Code module, or ALK's PC*MILER|Connect development application.) To purchase and install an additional PC*MILER product at a later time, follow these steps:

STEP 1: Call **ALK Technologies, PC*MILER SALES** at **1-800-377-6453**, 8:30am-5:30 pm EST, Monday-Friday to purchase the product and obtain a Product Key Code.

STEP 2: Place your original PC*MILER 17 Installation CD in the CD-ROM drive.

STEP 3: In the Installation Wizard, choose to **Modify** the application, then follow the on-screen instructions. To move between entry fields use your mouse or the **Tab** key. When prompted, enter your Product Key Code and check the product you want to install in the list of PC*MILER components. **IMPORTANT: Leave the checkmarks next to products that are already installed! If you remove the checkmarks, they will be uninstalled!**

STEP 4: You will need to obtain an Activation Code to open the new product. Step 6 in section 2.2.1 above describes how to do this. Once the new product is activated, you are set to go.

2.2.4 Uninstalling PC*MILER

To uninstall PC*MILER, click your Windows **Start** menu, select *Settings* > *Control Panel* > *Add/Remove Programs*. Highlight **PC*MILER 17** on the list of software applications – scroll the list if necessary – and proceed with the program removal.

2.2.5 Product Returns Must Be Deactivated

If for any reason you need to return your PC*MILER product, you must deactivate it before returning it in order to obtain a refund.

To deactivate, open the Windows **Start** menu and select *Programs* > *PCMILER 17* > *License Status,* then click **Deactivate**.

2.3 Starting PC*MILER

To start PC*MILER once the installation is complete, click the **PCMILER 17** icon your desktop or click the Windows **Start** button and select *Programs* > *PCMILER 17* > *PCMILER 17*.

2.4 On-line Help and *User's Guide* .PDF for PC*MILER

PC*MILER includes a complete system of on-line Help that's easy to use. Use the Table of Contents, index, or word search to navigate to the topics you need (these features are now accessible from the same window as the topic text). You can also click on the green underlined words in the topic text for more information.

On-line Help can be accessed through the Help menu or by clicking on the **Help** button in a PC*MILER dialog box or panel. PC*MILER **Help**

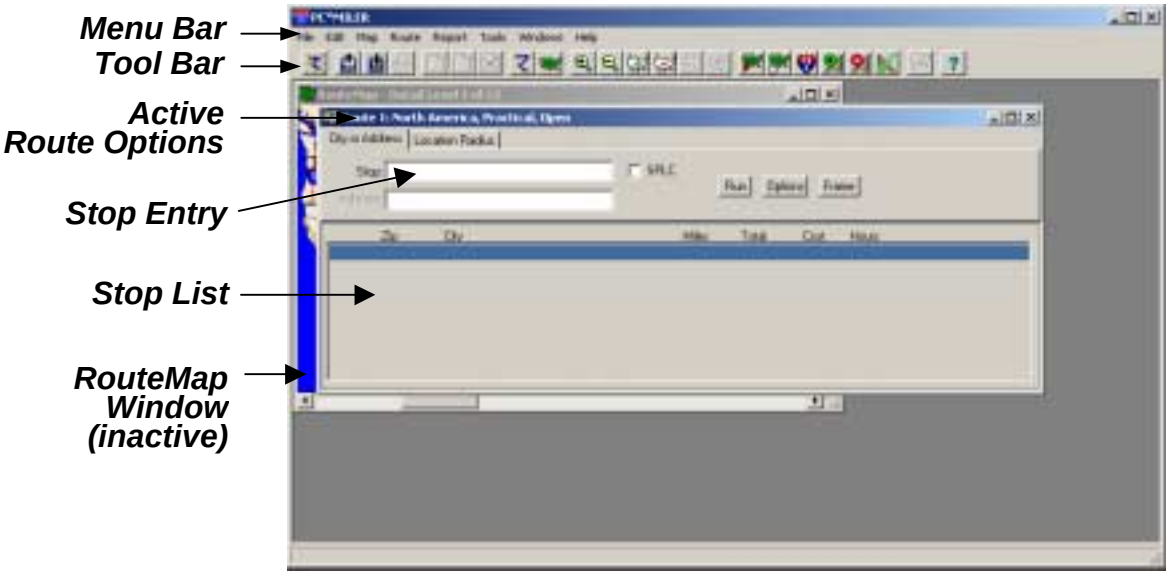
buttons are context-sensitive, which means that the Help invoked with a button will pertain to the open dialog box or panel. From there, you can search for Help on other subjects if you like.

From the Help menu, selecting *Contents* will open a help window with two panes. The left pane will display a Table of Contents that lists topics of general interest. Click any plus sign next to a topic to see the "pages" underneath. Double-click on any page to open it in the right pane of the help window. For more information on Help, select *Using Help* from the Help menu.

In addition to on-line Help files, the PC*MILER installation gives you the option of installing Adobe® Acrobat® Reader 5.0 so you can view this *User's Guide* on-line and print it. If you choose not to install Acrobat along with PC*MILER, you may want to install or reinstall it at a later date. To do this, run the Acrobat **setup.exe** file, located in the Acrobat folder inside the folder where PC*MILER was installed (usually **pmw170** by default).

3.0 BASIC ROUTING

When you first open PC*MILER, an active route entry window is displayed inside the main window as shown below:



*Initial View of PC*MILER*

You'll be using the **Stop** field in the **City or Address** tab of the route entry window to enter stops along your route. The stops you enter will appear in the **stop list**, which can be scrolled if necessary. After you click the **Run** button to run your route, the mileage, time and cost information generated for the route will appear in the columns to the right of the stop list.

You will also see the RouteMap window (it may be hidden under the route entry window). To bring the map forward, select *RouteMap* from the Windows menu.

At the top of the screen is a **menu bar** containing eight pull-down menus. Below the menus you'll see a **tool bar** containing buttons. Clicking on any one of these buttons will quickly issue the command or function it symbolizes. To see a brief description of each of these functions, pass your cursor (by moving the mouse) over each button without clicking. As your cursor touches each button, a description of its function will appear in the message area (lower left corner of the screen).

Try using the **New** button to open a new route entry window (or select *New Route* from the File menu). Then close it again – select *Close Route* from the File menu.

3.1 Menus and the Tool Bar

All menu options in PC*MILER are listed and briefly explained on the following pages. If a button on the tool bar can be used in place of an option, a picture of that button is shown to the right of the option. You may want to read through this section now to get an overview of the program, or use it later as a general reference.

3.1.1 The File Menu

Using the File menu, you can open, close, save and duplicate routes; print graphics and reports; and exit the PC*MILER program.

New Route		Open a route entry window for a new route.
Duplicate Route		Open a new route entry window and duplicate the route in the currently active window.
Open Route…		Open a previously saved route.
Close Route		Close the active route (the route will not be saved).
Close All		**Routes:** Close all open routes without saving. **Reports:** Close all open reports without saving.
Save Route		Save the active route with the current filename.
Save Route As...		Save the active route with a new user-specified filename.
Print Report\Map…		Print the report or map in the active window. This menu item will say **Print Report** or **Print Map** depending on which window is active.

Print Report\Map…		Print the report or map in the active window. This menu item will say **Print Report** or **Print Map** depending on which window is active.
Page Setup...		Open the Page Setup dialog box to control print options.
Exit		Exit PC*MILER. When you exit, all active windows are saved as they appear on your screen until the next time PC*MILER is opened.

3.1.2 The Edit Menu

Use the Edit menu to copy a map or report to the clipboard for export to another program, to insert and delete stops in the active route entry window, and to reverse the order of all stops in the stop list.

Copy Report\Map	Copy report or map to clipboard for use with other programs. This item will appear as **Copy Map** if the RouteMap window is active; or **Copy Report** if a report or route entry window is currently active.
Insert Stop	Insert a stop above the one that is highlighted on the stop list in the route entry window.
Delete Stop	Delete the stop that is highlighted on the stop list in the route entry window.
Delete All Stops	Delete all stops in the route entry window.
Reverse Stops	Reverse the order of all stops in the stop list.

3.1.3 The Map Menu

Use the Map menu to control the level of detail, the view and the contents of the map in the RouteMap window, and to enable stop entry using the mouse.

Zoom In Zoom in by a factor of two; can be repeated for closer views; increases detail.

Zoom Out Zoom out by a factor of two; can be repeated; decreases detail.

Frame Make a selection in the sub-menu to frame one of the following areas: **US**, **Puerto Rico**, **North America (NA)**, **Mexico**, **Hawaii**, **Greenland**, **Canada**, **or Bermuda**. **Auto Frame Route** automatically frames all routes when they are generated. **All Routes** frames every generated route drawn on the map. To frame just one route, select it from the bottom of the menu. (Another way to do this is to click the **Frame** button in the route entry window that was used to generate the route.)

Zoom to Stop Zoom to the stop that is highlighted in the active route entry window. (Or you can simply double-click the highlighted stop on the stop list in the route entry window to accomplish the same thing.)

Features... Invoke the Features dialog box to control which features are drawn on the map.

Redraw Redraw the current display in the RouteMap window.

Pick\Label Choose one from the sub-menu:

Pick Stops: select to pick stops with the mouse for route entry.

Label Cities: select to label and remove labels from locations with the mouse.

Label Roads: select to label and remove labels from roads with the mouse.

Favor Roads: select to mark roads to be favored for a route.

Avoid Roads: select to mark roads to be avoided on a route.

Toggle Overrides: enable the user to turn certain restricted roads on and off.

Adjust for Permits: enable the user to turn hazmat restricted roads on and off. *(For PC*MILER|HazMat only.)*

Clear Labels: delete all labels that have been added manually.

Detail

Add to, reduce or return to the default number of roads and place names drawn on the map (choose **More**, **Less**, or **Default** from the sub-menu). Choose **Use Shape Points** to show curves in roads in more detail when zoomed in.

Stop Labels

Choose whether to label stops by **Name Only**, **Number Only**, or by **Name & Number**.

Legends

Show\Hide the **Route Legend**, **Road Legend**, **Scale of Miles**, and\or **Restriction Legend** *(for PC*MILER|HazMat only)* – choose one or more from the sub-menu.

3.1.4 The Route Menu

Use the Route menu to generate a route, resequence stops, and invoke the Options and Default Options dialog boxes for setting options and routing parameters.

Run

Generate a route using the origin, destination and stops listed in the active route entry window.

Resequence Stops...		Resequence the stops listed in the active route entry window to achieve an optimal stop order.
Options...		Invoke the Options dialog box to set options and routing parameters for the current route.
Default Options...		Invoke the Default Options dialog box to set default options and routing parameters.

3.1.5 The Report Menu

Use the Report menu to generate reports, save a report to a file, and choose the size and style of the font (characters) for reports.

Detailed		Generate a Detailed Route Report for the active route.
State\Country		Generate a State\Country Distance Summary for the active route.
Comparison		Generate a Comparison Report that includes all open routes.
Save to File...		Save the report in the active Report window to a file (invokes the Save Report dialog box).
Font...		Choose the size and style of the font to be used in reports.

3.1.6 The Tools Menu

Use the Tools menu to create your own customized names for locations, set road preferences, control the appearance of the tool bar, save workspace settings, and set route entry options.

Manage Custom Places...	Open the Custom Place Manager dialog box to assign custom names to locations in the database.

Manage Custom Roads...	Open the Custom Roads Manager to view and edit road preferences for custom routing.
Import Custom Places…	Open the Import Custom Places dialog to import sets of custom places from a text file.
Convert Custom Roads…	Open a dialog that enables you to import custom road preferences from an older version of PC*MILER.
Tool Bar	Choose **Large Buttons**, **Small Buttons**, or **None** from the sub-menu to expand, shrink or hide the tool bar.
Multiple Name Instances	**Use Default:** Where multiple city names exist, use PC*MILER's default choice. **Provide Pick List:** Open a pick list of all cities matching the name entered in the Stop field (route entry window).
Save Preferences...	Open the Save Preferences dialog to save your workspace settings for future use, or to automatically save these settings each time you exit PC*MILER.

3.1.7 The Windows Menu

The Windows menu is a standard Windows feature that enables you to rearrange the display of open windows or icons and activate minimized or inactive windows. Open windows are shown as numbered items at the bottom of this menu.

Cascade		Cascade windows from upper left corner.
Tile		Open RouteMap, Route Entry and Report windows and organize them in a "tile" (side by side) arrangement.
Arrange Icons		Organize icons in lower left corner.
1 Route 1		Activate the route entry window for the named route (in this case **Route 1**).

2 RouteMap		Activate the RouteMap window if it is minimized or inactive.

3.1.8 The Help Menu

The Help menu is a standard feature of Windows. PC*MILER's Help menu gives you different ways to access a complete system of on-line Help.

Contents & Index		Open PC*MILER's on-line Help at the Table of Contents (click on the **Index** tab to see an index, use the **Search** tab to search for a specific word or phrase).
Topic Look Up		Open Help for the open dialog box or window.
Menus		Open the Menu Reference section of Help (includes tool bar equivalents of menu commands).
Keyboard		Open a list of a shortcut keys in PC*MILER.
Using Help		Open a Windows file that explains how to use Help.
State\Country Names...		Open a scrollable list of state, province, and country abbreviations and names (this list can remain open as you work in PC*MILER).
About...		Display general information about PC*MILER, including version number, serial number and name of the licensed user.

3.1.9 PC*MILER Function Shortcut Keys

The following is a list of keystrokes in PC*MILER that provide shortcuts to various menu options.

Key(s)	Function
F1	Invoke Topic Look Up in on-line Help.
F2	Invoke the Custom Place Manager.
Alt-F2	Invoke the Custom Roads Manager.
F3	Open a scrollable list of state abbreviations.
Alt-F3	Invoke the Options dialog box for the active route.
F4	Generate a Comparison Report.
Alt-F4	Exit PC*MILER.
Ctrl-F4	Close (delete) the active route entry window or report window.
F5	Display the Detailed Route Report for the active window.
F6	Display the State\Country Distance Summary Report.
F7	Insert a stop ***above*** the one highlighted on the stop list.
F8	Delete the stop that is highlighted on the stop list.
Alt-F8	Delete all stops in the route entry window.
F10	Generate routes and distances (equivalent to clicking the **Run** button in the route entry window).
Alt-F10	Resequence stops for an optimal route.
Alt-Bkspace	Undo typing in any entry field.

3.1.10 For Former DOS Users: A Comparison of Functions

The table below may be helpful to former users of the DOS version of PC*MILER who are now using PC*MILER. The last column shows you what to do in Windows to accomplish what you used to with a function key in DOS. Some of the function keys are the same in both versions.

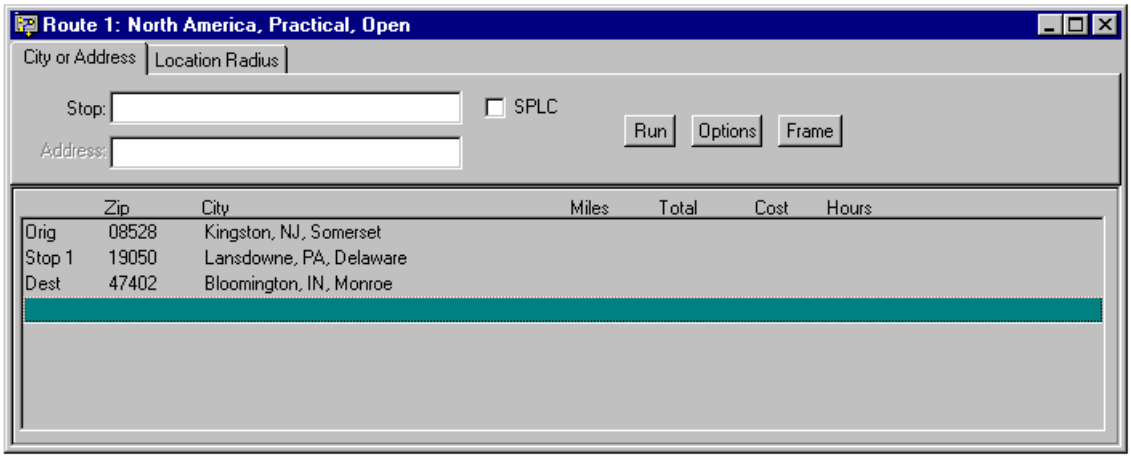
KEY(S)	Function in DOS	What To Do In Windows
F1	**Help Menu**	**Same**
F2	**Exits PC*MILER**	**Choose "Exit" from the File menu**
F3	**State\Country abbreviations list**	**Same**
F4	**Change route type**	**Go to the Options dialog box (use the Options button in the route entry window)**
Alt-F4	**Borders open\closed menu**	**Go to the Options dialog box (use the Options button in the route entry window)**
F5	**Detailed Route Report**	**Same**
Alt-F5	**Miles\Kilometers toggle**	**Go to the Options dialog box (use the Options button in the route entry window)**
F6	**State\Country Distance Summary**	**Same**
Alt-F6	**Hub\Normal mode toggle**	**Go to the Options dialog box (use the Options button in the route entry window)**

KEY(S)	Function in DOS	In Windows
F7	**Inserts stop above cursor**	**Same**
F8	**Deletes the highlighted stop**	**Same**
Alt-F8	**Deletes all stops in the route entry window**	**Same**
F9	**Prints reports**	**Choose "Print Report..." from the File menu while the window containing the report is active**
Alt-F9	**Appends multiple reports**	**Use "Save to File" in the Report menu, then print the file**
Ctrl-F9	**Ejects a page from printer**	**-----**
F10	**Generates the route ("Run")**	**Same**
Alt-F10	**Resequences stops**	**Same**
Ctrl-F10	**Reverses the order of stops in the route entry window**	**Choose "Reverse Stops" from the Edit menu**
Alt-B	**Lists states in route-through order in the State\Country Distance Summary**	**Go to the Options dialog box (use the Options button in the route entry window)**
Alt-D	**Deletes a saved route**	**Use the File Manager (a Windows feature)**
Alt-L	**Loads a saved route**	**Choose "Open Route..." from the File menu, use the Save Route dialog box**
Alt-M	**Memo field input**	**Go to the Options dialog box (use the Options button in the route entry window)**
Alt-O	**Edit startup settings**	**-----**

KEY(S)	Function in DOS	In Windows
Alt-P	**Set stop-off time and cost**	**Go to the Options dialog box (use the Options button in the route entry window)**
Alt-R	**RouteMap display**	**Double-click on the RouteMap icon if the RouteMap window is minimized**
Alt-S	**Save Route to File**	**Use the "Save Route" or "Save Route As" command in the File menu**
ESC	**Exit pick lists and dialogs**	**-----**

3.2 Entering Stops on a Route

To generate distances and driving instructions for a route, you must first specify an origin and destination(s) in the **City or Address** tab of the route entry window that appears when you open PC*MILER, as shown below. To open a new route entry window, click on the **New Route** button on the tool bar. (Note that the **SPLC** check box in the illustration below will only appear in the route entry window if you have purchased the SPLC code add-on module.)



Entering Stops in the Route Entry Window

You may enter an unlimited number of stops. PC*MILER will always treat the stop at the top of the stop list as the origin of the route and the last stop on the list as the destination, unless you are generating hub distances (see section 4.10).

You may input cities and towns in the route entry window in any of the ways that are listed below and described on the following pages:

- Type the city name, followed by the state abbreviation
- Use the Spelling Helper pick list of matches
- Type a 5-digit ZIP code
- Type a 6-digit Canadian Postal Code (separate add-on module)
- Type a SPLC Code (separate add-on module)
- Use the Code Helper pick list of matches
- Point and click with the mouse on a location in the RouteMap window
- Type or point-and-click on a latitude\longitude point.

3.2.1 City Name and State Abbreviation

In the **Stop** field, type the city name and the two-letter state\province abbreviation of the origin of your route. The city name can be any length. The city and state do not need to be capitalized, but do need to be separated by either a comma or a space, as in these examples:

chicago, il
chicago,il
chicago il

Now press the **<ENTER>** key on your keyboard. Continue to enter stops in the order you want them to appear on the route. PC*MILER will always consider the first stop listed in the route entry window to be the origin of the route and the last stop to be the destination, unless you are generating hub distances (see section 4.10).

After you enter a city name and state abbreviation, PC*MILER will return the corresponding ZIP code for the city or town, provided that the locale has a ZIP code assigned to it. The corresponding county name will also be returned. Mexican place names do not have postal codes; Canadian postal codes and SPLC codes can be entered **only with the use of their separate add-on data modules**, available through ALK Technologies. Canadian place names can otherwise only be entered as the city name and province abbreviation; Mexican place names can only be entered using the city name and country abbreviation (MX).

If you're unsure of the correct abbreviation for a state, press the **<F3>** key to bring up a scrollable list of two-letter state\province abbreviations. Scroll the list if necessary to find the abbreviation you want.

NOTE: The State Names list is a reference list and part of PC*MILER's on-line Help, not a pick list, so you won't be able to choose an item off the list for entry in the **Stop** field. To close the window containing the list, choose *Exit* from the File menu for Help.

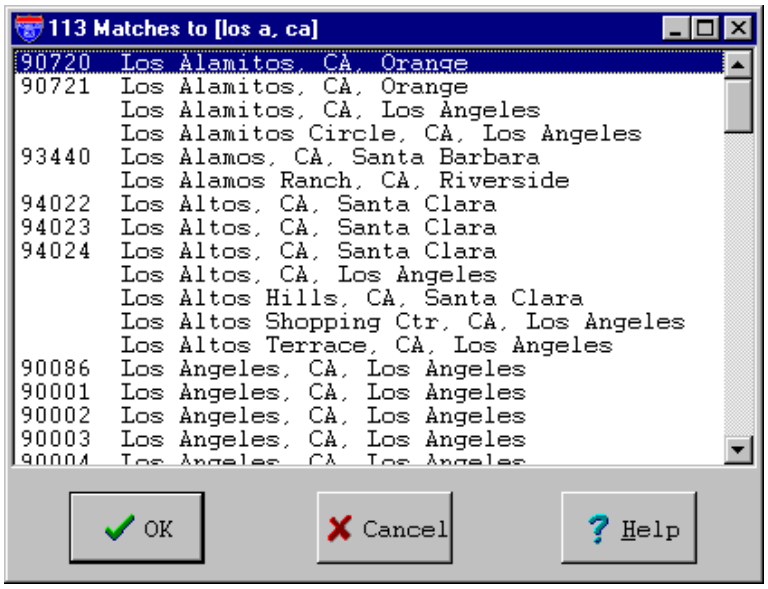
⇒ **HINT:** You may want to keep the state abbreviations list open as you work. To do this, you'll probably need to resize the window containing the list and the PC*MILER main window.

If the city name contains two or three words, each portion of the city name must be separated by spaces, for example

los angeles, ca
los angeles,ca
salt lake city ut

PC*MILER will search through the database and select the ZIP code that matches the city name you entered. In the case of large cities with multiple ZIP codes, the match will most often be the main post office.

3.2.2 Using the Spelling Helper


113 Matches to [los a, ca]
90720 Los Alamitos, CA, Orange
90721 Los Alamitos, CA, Orange
Los Alamitos, CA, Los Angeles
Los Alamitos Circle, CA, Los Angeles
93440 Los Alamos, CA, Santa Barbara
Los Alamos Ranch, CA, Riverside
94022 Los Altos, CA, Santa Clara
94023 Los Altos, CA, Santa Clara
94024 Los Altos, CA, Santa Clara
Los Altos, CA, Los Angeles
Los Altos Hills, CA, Santa Clara
Los Altos Shopping Ctr, CA, Los Angeles
Los Altos Terrace, CA, Los Angeles
90086 Los Angeles, CA, Los Angeles
90001 Los Angeles, CA, Los Angeles
90002 Los Angeles, CA, Los Angeles
90003 Los Angeles, CA, Los Angeles
OK
Cancel
Help

Spelling Helper Pick List of Matches

If you're not sure how to spell a city name, or if you received an error message when entering the full city name and state abbreviation, try using the Spelling Helper. The Spelling Helper pick list can be invoked by typing the first two or more letters of the city name followed by a comma or space and the two-letter state abbreviation. You must specify at least the first two letters of the city name.

Examples: **chic,il**
pr nj
los ang, ca
los a,ca

The Spelling Helper will search through the cities in the given state and find every name that starts with the specified characters. If only one city starts with the given characters, it will be returned immediately unless *Provide Pick List* is chosen from the sub-menu of *Multiple Name Instances* in the Tools menu. If multiple cities start with the same given characters, or if a city has multiple ZIP codes, all matches will be displayed on the screen. Scroll the list if necessary and highlight the city or ZIP code that you wish to select, then click on **OK**.

Place names that are more than 32 characters long will be interrupted in the pick list by a set of ellipses (**…**). When highlighted, the complete place name will appear at the bottom of the pick list, in a scrollable display area.

3.2.3 Entering 5-digit ZIP Codes

Entering any valid 5-digit ZIP code will cause PC*MILER to search for the corresponding city and state name and display it on the main screen next to the ZIP code.

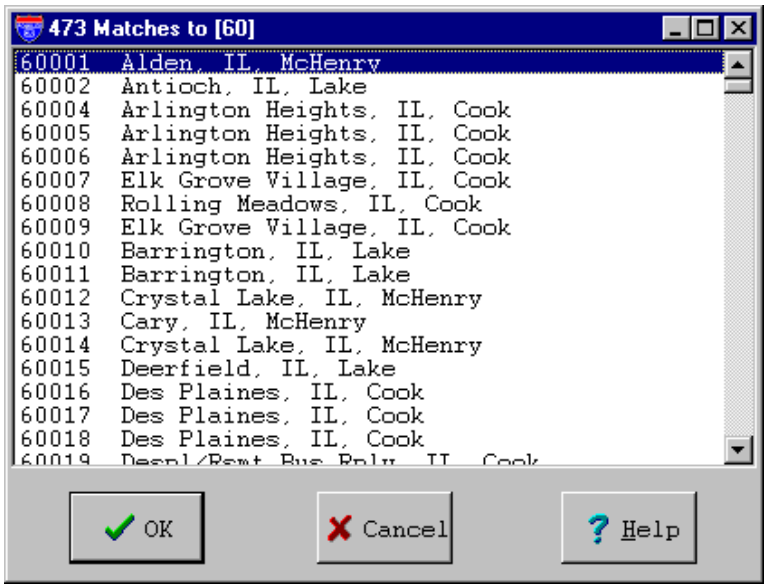
If you enter: **60609** PC*MILER will return: **60609 Chicago, IL, Cook**

3.2.4 Using the ZIP Code Helper

If you're unsure of a particular ZIP code or if you receive an error message when using a 5-digit ZIP code, type the first two or more digits and press **<ENTER>**.

The ZIP Code Helper operates exactly like the Spelling Helper. If there is only one ZIP code matching the digits you entered, it is returned immediately unless *Provide Pick List* is chosen from the sub-menu of *Multiple Name Instances* in the Tools menu. If there are multiple ZIP codes having the same first digits that you entered, they will be displayed

on the screen. Scroll the list if necessary and highlight your choice, then click on **OK**.


473 Matches to [60]
60001 Alden, IL, McHenry
60002 Antioch, IL, Lake
60004 Arlington Heights, IL, Cook
60005 Arlington Heights, IL, Cook
60006 Arlington Heights, IL, Cook
60007 Elk Grove Village, IL, Cook
60008 Rolling Meadows, IL, Cook
60009 Elk Grove Village, IL, Cook
60010 Barrington, IL, Lake
60011 Barrington, IL, Lake
60012 Crystal Lake, IL, McHenry
60013 Cary, IL, McHenry
60014 Crystal Lake, IL, McHenry
60015 Deerfield, IL, Lake
60016 Des Plaines, IL, Cook
60017 Des Plaines, IL, Cook
60018 Des Plaines, IL, Cook
OK
Cancel
Help

ZIP Code Helper Pick List of Matches

Place names that are more than 32 characters long will be interrupted in the pick list by a set of ellipses (**...**). When highlighted, the complete place name will appear at the bottom of the pick list, in a scrollable display area.

3.2.5 Canadian Postal Codes

A list of over 802,000 six-digit Canadian postal codes is available as an add-on data module for PC*MILER. The codes are always a combination of letters and numbers in the following format: **L#L #L#**. Entering any valid Canadian postal code will cause PC*MILER to search for the corresponding city and province name and display it on the main screen next to the postal code.

If you enter: **K7L 4E7** PC*MILER will return: **K7L 4E7 Kingston, ON**

This PC*MILER supplement contains a Canadian Postal Code Helper that works in the same way as the ZIP Code Helper (see the previous section). Type the first three or more characters of the postal code and press **<ENTER>**. The more characters specified, the faster PC*MILER will return a list of possible selections.

Place names that are more than 32 characters long will be interrupted in the pick list by a set of ellipses (**…**). When highlighted, the complete place name will appear at the bottom of the pick list, in a scrollable display area.

3.2.6 SPLC Codes

A list of SPLC codes is available as an add-on data module for PC*MILER. A SPLC code can be entered as a stop for any location in North America that has a SPLC assigned to it. SPLC codes may be six or nine digits in length. To enter a SPLC, first check the **SPLC** box located to the right of the **Stop** field, then type your entry and press **<ENTER>**. If you enter a SPLC code when the **SPLC** box is not checked, an error message will appear in the stop list.

Note that when a SPLC code is highlighted on the stop list, the column heading at the top of the stop list will change from “Zip” to “SPLC”.

A SPLC Helper similar to the ZIP Code Helper (described in section 3.2.4) is available if you need help finding the correct SPLC for a particular location. To invoke the SPLC Helper, **make sure the SPLC box is checked**, type **at least the first three digits** of the SPLC and press **<ENTER>**.

⇒ **NOTE:** When the SPLC box is selected, you will not be able to enter ZIP codes.

Place names that are more than 32 characters long will be interrupted in the pick list by a set of ellipses (**…**). When highlighted, the complete place name will appear at the bottom of the pick list, in a scrollable display area.

3.2.7 Zoom To a Location On the Map

To zoom the view in the RouteMap window directly to a specific city or address, first enter the stop, and be sure that it is highlighted in the stop list. Then click the **Zoom to Stop** button on the tool bar (or you can double-click the highlighted stop).

3.2.8 "Point and Click" Feature: Picking Stops From the Map

PC*MILER gives you the capability to enter stops in the route entry window directly from the RouteMap window **without typing**. To do this, first open the RouteMap window if it is minimized. Next, click on the **Pick Stops** button on the tool bar or select *Pick Stops* from the sub-menu of the *Pick\Label* option in the Map menu. Now use the mouse to point to

the location you wish to enter and click once. The selected location will be entered as a stop in the most recently active route entry window.

You can use the mouse to select any point on the map. If the point is a node on a highway, the place name will be returned; otherwise, a latitude\longitude position will be returned.

⇒ **HINT:** Pass your cursor over the map without pressing the mouse button. Notice that its **latitude\longitude position is automatically tracked** and appears in the status bar in the lower left corner of the program window.

3.2.9 Input Error Messages

One of several error messages might be returned when entering city names and ZIP codes. If you encounter an error message then you should try the following:

1. Double-check that you separated the city name and state abbreviation with a comma or space.
2. If you are entering a SPLC code, make sure that the **SPLC** box is selected to the right of the **Stop** field.
3. Use the Spelling Helper.
4. Use the exact ZIP code or the ZIP Helper.

In all cases, the ZIP code takes precedence over the city and state name. As a result, certain suburbs or small towns may not have their actual names in the database, but rather the name of the larger nearby city. In these cases, the 5-digit ZIP code for the smaller community will have to be entered to achieve correct results.

3.2.10 Duplicate City Names

Several states have cities or towns that share the same name. For example, in the state of Pennsylvania, there are two towns named Hamlin, one in Wayne County and one in Lebanon County. The PC*MILER database contains several thousand examples of such duplicates. In certain circumstances, duplicates can be separately identified by means of their differing ZIP codes. However, some duplicate towns do not have a ZIP code assigned by the Postal Service. You can identify your desired stop from all of its duplicate towns by the county listing in the town name. In the database, the county name follows the state abbreviation (i.e. **Hamlin, PA, Wayne**).

If you are not sure which city is the stop you want, set *Multiple Name Instances* in the Tools menu to **Provide Pick List**, and then enter the city

name and state abbreviation. Select the correct city from the choices provided.

If you choose **Use Default** in *Multiple Name Instances*, PC*MILER will select a default city, predetermined by the U.S. Postal Service. The default city's selection is based on such factors as population and geographic centrality.

If you know the county in which the duplicate city is located, you can enter that exact city in the stop entry field. Do so by entering the city and state names in a normal fashion, followed by a comma and the county name. Your entry must be in one of the following formats:

hamlin, pa, wayne	**hamlin,pa, wayne**
hamlin, pa,wayne	**hamlin,pa,wayne**

You can also use the Spelling Helper from the route entry window to select the correct city based on its county shown in the pick list. By default, the town with a ZIP code will be entered when using the city\state entry.

In Canada, duplicate city names are found in the same provinces. PC*MILER identifies the town by assigning a county or touristic region code to it. The code is listed after the province abbreviation in the same way that the county name follows the US city name. A complete listing of these codes can be found in Appendix B and the on-line Help.

Mexico also contains duplicate names, which can be distinguished from one another by the states in which they are located. PC*MILER lists all Mexican stops with their state names included, in the format **(city name), MX, (state name)**. An example of a duplicate Mexican city name is:

Guadalajara, MX, Chihuahua
Guadalajara, MX, Jalisco

(See Appendix D for a complete listing of Mexican state names and abbreviations.)

3.3 Inserting and Deleting Stops

Either choose *Insert Stop* from the Edit menu or press the **<F7>** key to insert a stop. The stop will be inserted above the one that is currently highlighted on the stop list.

To delete a stop, highlight it on the list and choose *Delete Stop* from the Edit menu or press the **<F8>** key.

To delete all stops from the active route entry window, choose *Delete All Stops* from the Edit menu or press **<Alt>** and **<F8>** simultaneously.

3.4 Moving and Copying Stops

Any stop in the route entry window can be moved to a new position on the list. Simply highlight it and, holding the **Shift** key down, use the up and down arrows on your keyboard.

Stops can also be copied from one route entry window to another. Click on the stop and hold down the left mouse button. When the cursor turns into a hand, you can drag and drop the stop into another window.

3.5 Synonym Table

When you enter a city name that contains an abbreviated word such as "Bch" for "Beach" or "St" for "Saint", the Synonym Table helps PC*MILER successfully locate the city you entered. If you try to enter a place name that contains such an abbreviation and receive an error message, try entering the name using a different abbreviation or spelling out the whole word. But note that **only one synonym can be used per place name**, e.g. "E Saint Louis" is valid, whereas "E St Louis" is not.

An excerpt from the Synonym Table is shown below. The table is contained in a file called "SYNONYM.TAB" in the PCMILER data folder.

BEACH/BCH/BCH./BEAC/BEA/
BLUFFS/BLFS/BLF/BLUF/BLUFS/
CAMP/CP/CP./
CENTER/CTR/CTR./CEN/CENT/
CITY/CY/CY./CIT/CI/CTY/
EAST/E/E./EST/EAS/
FALLS/FLS/FLS./FALL/FAL/
FORT/FT/FT./FRT/
SAINT/ST/STE/SAINTE/ST./STE/

The syntax for each line is:

<translated name>/<possible abbreviations of the translated name>

For example, in the first line, "BEACH" is the translated name and "BCH/ BCH./ BEAC/ BEA" are the possible abbreviations. Note that there is one forward slash [/] separating each of the abbreviations.

PC*MILER only uses the Synonym Table when an input city name is not found. For example, if you were to enter "ST LOUIS, CA", PC*MILER will make the translation to "SAINT" based on the Synonym Table.

3.5.1 Modifying the Synonym Table

Using any standard text editor in DOS or Windows, you can easily modify the Synonym Table to include more abbreviations. Additional lines must follow these guidelines:

- Each line in the file can contain abbreviations for only one translated name.
- The first word in the line must be the translated name or a ZIP\postal code. This word can be any length.
- All abbreviations for the translated name must be separated by a forward slash [/] following the translated name. Each abbreviation can be any length and can include spaces.
- The total length of each line must be less than 80 characters, and the total number of lines cannot exceed 2,000.
- Each line must end in a forward slash.

3.6 Border Crossings

In PC*MILER, it is possible to access state border crossings using the PC*MILER border crossing naming convention. Border crossing names have the following syntax:

!XXYY Name, XX

where **XX** is the two-letter abbreviation of the state that is first in alphabetical order, **YY** is the abbreviation of the state that is second in alphabetical order, and **Name** is the route name of the route that crosses the border (there is no limit to the number of characters in a route name).

In cases where the road name is different on either side of the border, the road name used is the one that lies within the state first in alphabetical

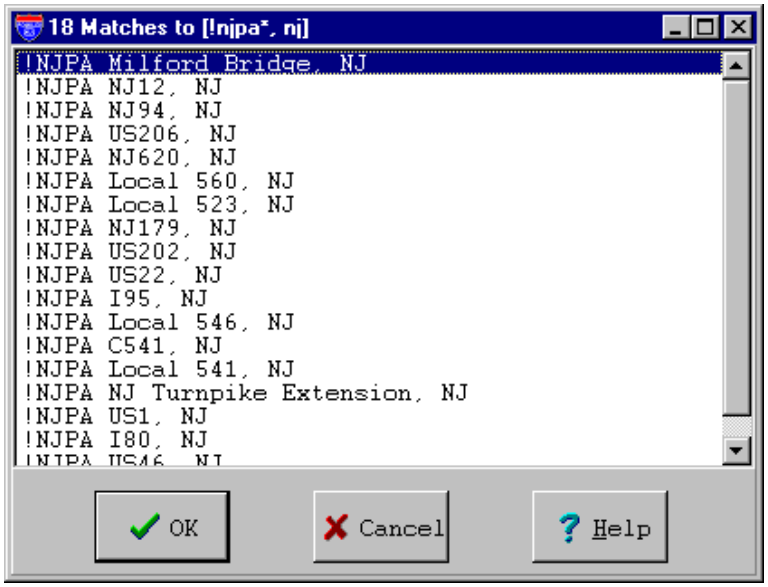
order. For example, the border along Interstate 95 between Pennsylvania and New Jersey is called

!NJPA I95, NJ

To quickly locate all possible border crossings between two states, use the [*] wildcard character. For example:

!NJPA *, NJ

will bring up the pick list illustrated below. This pick list, similar to the lists generated by the Spelling and ZIP Code Helpers, lists all Pennsylvania\New Jersey border crossings:



Pick List of PA\NJ Border Crossings

Border cossing names that are more than 32 characters long will be interrupted by a set of ellipses (**...**). When highlighted, the complete place name will appear at the bottom of the pick list, in a scrollable display area.

3.7 Highway Junctions

PC*MILER allows you to access highway junctions between major road types in the United States, Canada, and Mexico. (Note, however, that There are some highway junctions which are truck-inaccessible. These junctions will not be recognized as stops.

Entering highway junctions is easiest when you use the Spelling Helper as follows: enter the abbreviation for the state where the junction is located. This will open the Spelling Helper. Then type "**+**", bringing you to the section of the Spelling Helper that lists all highway junctions. Highlight your choice, and click **OK**.

Highway junctions can also be accessed in a manner similar to that used to access border crossings. In the junction naming convention, the plus sign [**+**] designates a junction point. The first route name is the lower numbered one, and the second route name is the higher numbered one. The route names are followed by the abbreviation of the state in which the junction is located. An example of this is:

+I 65 I 70E, IN

To access junctions where road types differ, the higher level road must be entered first, regardless of road number. For example:

+US421 LCL16, IN

As with other PC*MILER features, a pick list can be generated which displays all the junctions for a particular highway. For example:

+US 1*, NJ

will bring up a pick list of every junction in the PC*MILER database in NJ that involves US Route 1.

Highway junctions that are more than 32 characters long will be interrupted in the pick list by a set of ellipses (**…**). When highlighted, the complete place name will appear at the bottom of the pick list, in a scrollable display area.

In cases where two junctions by the same highway pair occur within the same state, the junctions are designated by a location direction (N,S,E,W) relative to the location of the other junction. For example:

+US 231 IN 66W, IN

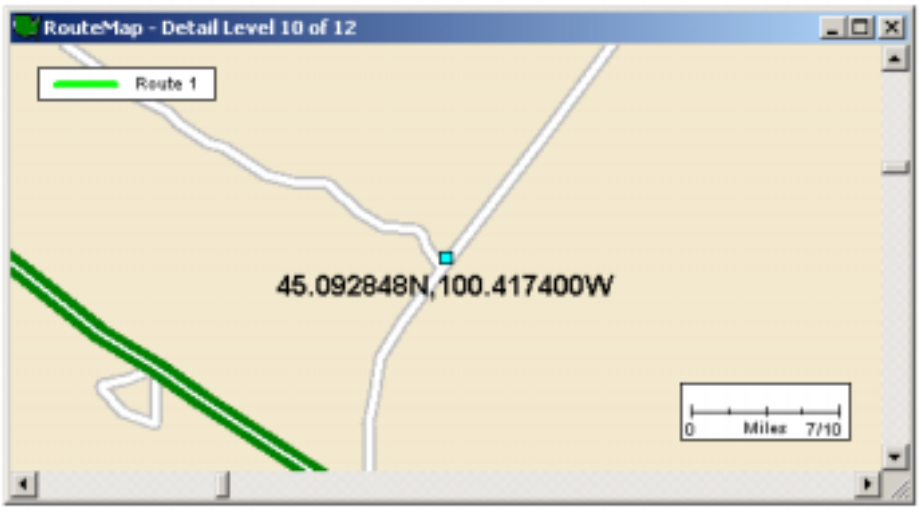
is located one mile west of

+US 231 IN 66E, IN

To designate interstate highways, use the naming convention **I**. For US highways, use **US**. For state or provincial highways, use the standard two-letter abbreviation. For example:

I 380 or **US 101** or **PA 100**

3.8 Latitude\Longitude Points



PC*MILER enables you to enter latitude\longitude points as stops on a route. These points can be entered in ***degrees minutes seconds direction*** format (e.g. **0401750N,0742131W**) or ***decimal degrees*** (e.g. **40.123N,100.333W**). Lat\long points will be labeled in the RouteMap window just like other stops. In Pick Stops mode, lat\longs can be entered by clicking on the map wherever a node is not present. (Click the **Pick Stops** button on the tool bar to turn on this mode.)

3.9 Highway Exits

PC*MILER now includes all Interstate-to-Interstate exit numbers. It also includes all Interstate exits leading to non-Interstate highways, with the exception of exits that have an A\B suffix (e.g. Exit 36A, Exit 14C).

To enter a highway exit as a stop in the route entry window, you can enter "**^**" (**Shift-6**) followed by a comma and state abbreviation to bring up a pick list. For example, entering "**^, nj**" brings up a pick list of all exits in New Jersey that are in the PC*MILER database. Then make your selection in the pick list and click **OK.**

You may also enter an exit directly. For example, type

^i10 x17, fl

to enter Exit 17 off Interstate 10 in Florida.

3.10 Truck Stop Locations

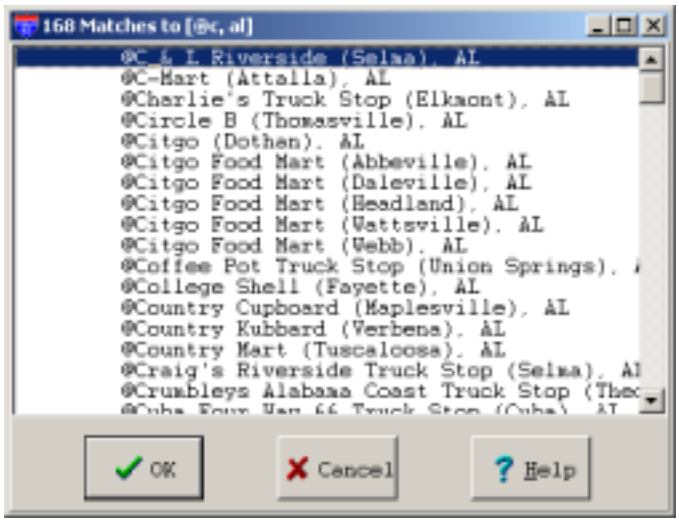
In cooperation with Comdata Corporation and Zenrin USA, Inc., the PC*MILER database contains more than 6,300 newly updated truck stops used in Comdata's GeoFUEL truck stop network and provided by Zenrin USA. These truck stops can be accessed like other places in the PC*MILER database, and can be entered as stops on your routes.

To enter a truck stop as a stop on a route, you may type its name in the **Stop** field (if you know it) in the format described below. You may also pick a truck stop off the map using the mouse (see section 3.2.8), provided "Truck Stops" are turned on in the Map Features dialog box (see section 5.4). Truck stops are represented on the map by small red gas pump icons. You may have to zoom in closely to see the name of the truck stop and to pick it as a stop.

The syntax for truck stops is comprised of the "at" symbol [@] marking the entry as a truck stop, the **truck stop name**, and the **state** in which the truck stop is located. An example is:

@Route 46 Truck Stop, NJ

To find truck stops using the Spelling Helper, you must use the [@] symbol, the first letter of the truck stop's name, and the two-letter state abbreviation preceded by a comma. For example, typing **@c*, al** will produce a pick list of all Comdata's listed truck stops in Alabama beginning with the letter "C".


168 Matches to [@c, al]
@C & L Riverside (Selma), AL
@C-Mart (Attalla), AL
@Charlie's Truck Stop (Elkmont), AL
@Circle B (Thomasville), AL
@Citgo (Dothan), AL
@Citgo Food Mart (Abbeville), AL
@Citgo Food Mart (Daleville), AL
@Citgo Food Mart (Headland), AL
@Citgo Food Mart (Wattsville), AL
@Citgo Food Mart (Webb), AL
@Coffee Pot Truck Stop (Union Springs),
@College Shell (Fayette), AL
@Country Cupboard (Maplesville), AL
@Country Kubbard (Verbena), AL
@Country Mart (Tuscaloosa), AL
@Craig's Riverside Truck Stop (Selma), AL
@Crumbleys Alabama Coast Truck Stop (Theo
OK
Cancel
Help

Truck Stop Pick List

Truck stops that are more than 32 characters long will be interrupted in the pick list by a set of ellipses (**…**). When highlighted, the complete place name will appear at the bottom of the pick list, in a scrollable display area.

3.11 CAT Scale Weigh Stations

CAT Scale weigh station locations may now be entered as stops on a route. To enter a weigh station, you may type its location in the **Stop** field (if you know it) preceded by a pound sign (#). An example is:

#Petro Stopping Center, NJ

To bring up a pick list of all CAT weigh stations in a particular state, enter a pound sign followed by a comma and the state abbreviation (for example, "**#, nj**").

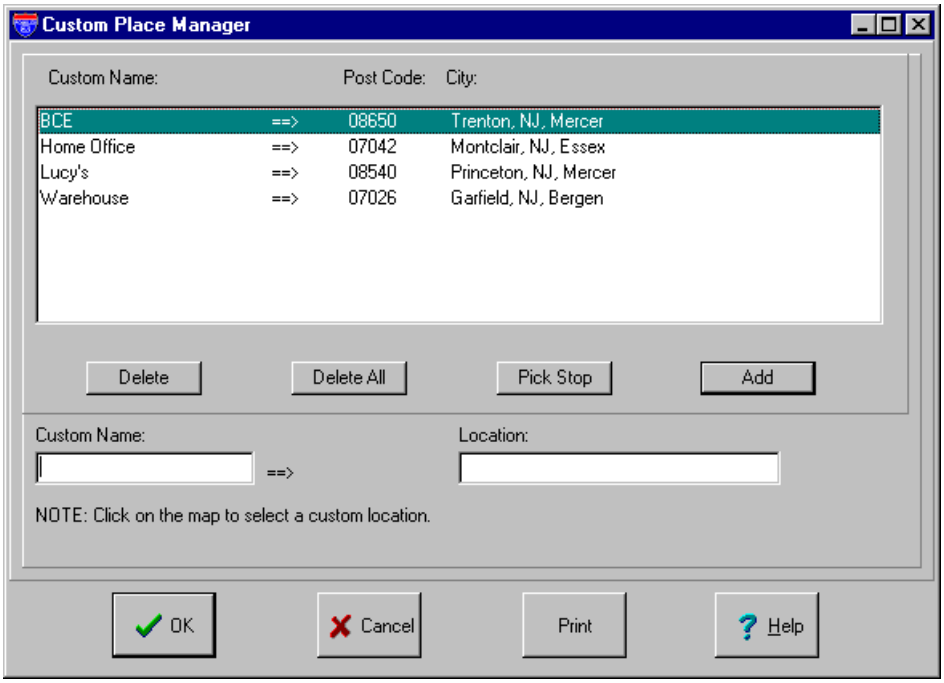
You can also pick a CAT Scale location off the map using the mouse (see section 3.2.8), provided "CAT Scales" are turned on in the Map Features dialog box (see section 5.4). Weigh stations are represented on the map by small "cat face" icons. You may have to zoom in closely to pick one as a stop.

3.12 Using the Custom Place Manager to Customize Location Names

PC*MILER gives you the capability to assign your own names to locations in the PC*MILER database. To do this, choose *Manage Custom Places...* from the Tools menu or press **<F2>** to bring up the Custom Place Manager dialog box.

Enter the name you wish to assign in the **Custom Name** field (lower left corner) and the proper name of the location in the **Location** field, then click on **Add**. **If you are entering a SPLC, be sure to check the box labeled "SPLC" before entering the code.**

The Spelling Helper is available to help you enter city names in the **Location** field. There is no limit to the number of characters allowed in the custom name. Any type of location that can be entered in the route entry window can be used in the Custom Place Manager. An entry in the **Location** field can also be made by clicking on the map.



Custom Place Manager

You will see your entry appear in the list of custom places. Your custom point may now be entered as a stop in the route entry window. It will appear on the stop list and on all reports with an asterisk next to it and the real name of the place in parentheses, enabling you to identify those stops on a route that have customized names.

While the Custom Place Manager is open, you can enter a custom point as a stop in the currently active route entry window by highlighting it on the list and then clicking on **Pick Stop**.

Custom names and locations that are more than 32 characters long will be interrupted in by a set of ellipses (**…**). When highlighted, the complete place name will appear at the bottom of the list, in a scrollable display area.

To delete a place, highlight it on the list and click on **Delete**. Use the **Delete All** button to delete all custom places. Any changes to the list of custom places are saved when you exit PC*MILER. An unlimited number of custom places may be created.

⇒ **NOTE:** Canadian postal codes and SPLC codes can be entered as custom places, **if you purchased the necessary add-on data modules.** Custom places using Canadian postal codes and SPLC codes are created in the same manner as ZIP codes. However, SPLC customers must be

sure that the SPLC box in the Custom Place Manager is selected before entering the SPLC code.

3.12.1 Converting Custom Place Files from Older Versions of PC*MILER

You can convert saved custom places from PC*MILER versions 13.0 or higher. From your Windows **Start** menu, select *PCMILER 17* > *Options* > *Custom Place Conversion Utility*. Click **Import** and navigate to your existing Alias.dat file. (This file is usually located in the Na > Options folder in your PC*MILER installation folder.) After you find the file, click **Open** and your saved custom places will be imported.

3.13 Creating Custom Latitude\Longitude Points in the Database

You can create custom places in the PC*MILER database by using the Custom Place Manager (see the previous section) to assign a name of your choosing to a latitude\longitude point. For instance, you could type "**My House**" in the **Custom Name** field, and "**40n,100w**" in the **Location** field. After you add this name to the list, you'll be able to enter "**My House**" as a stop on your route.

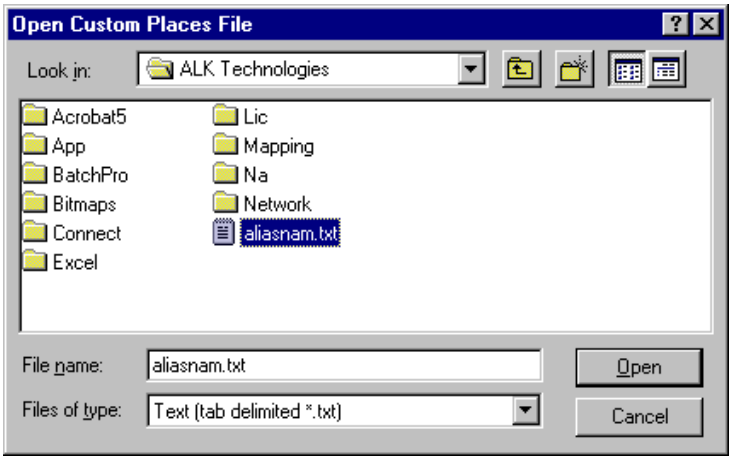
Another way to do this is to click on any point on the map in the RouteMap window while the Custom Place Manager is open. The latitude and longitude for the point you selected will be entered in the **Location** field. You can then type your custom name in the **Custom Name** field and click **Add** to add it to the database.

3.14 Importing Custom Places

Using the **Import Custom Place Wizard**, you can import sets of custom places that were created in an environment independent of PC*MILER. You can also enter sets of imported places as stops in the route entry window. These features are handy for entering large sets of custom places which otherwise would have to be manually typed into PC*MILER.

The Import Custom Place Wizard loads tab delimited text or Microsoft Excel 4.0 records, geocodes them (converts them to a format that PC*MILER can use), and then adds them to the PC*MILER database. To open the Import Custom Place Wizard, select *Import Custom Places* from the Tools menu.

In the Open dialog box, choose the drive and directory where your data file is located, select your saved file from the **File name** pick list or type the complete file name in the **File name** field.



You must also specify the type of file you are importing by making a selection in the **Files of type** drop-down listbox. **Please note that PC*MILER cannot import Excel files from any version of Excel higher than 4.0. Files created using more recent versions of Excel must first be saved in Excel 4.0 format from within Excel.** For file type, choose between tab delimited text (**.txt**) or **Excel 4** files (**.xls**). Once you have selected the file to be imported, click **Open**.

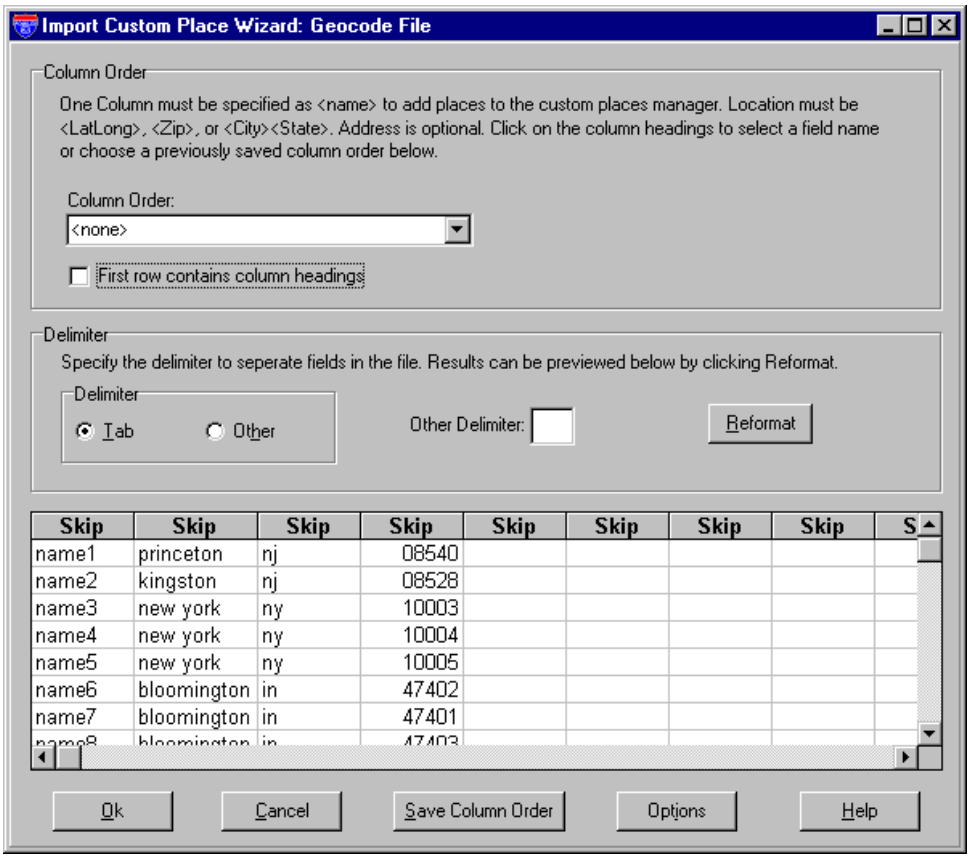
⇒ **Hint:** You can also import other types of data files. If you have a compatible version of Excel, first import the data file into Excel. Once this is done, you can then export the file to PC*MILER as either an Excel 4 or tab delimited text file. (See your Excel *User's Guide* for more information about the types of files that it can import.)

3.14.1 Geocoding Import Files

After you open your data file, the **Geocode File** window is activated. This window organizes the data in your file so that the information can be processed by PC*MILER and added to the Custom Place Manager.

The table at the bottom of this window displays the records in your data file. Each column heading will eventually tell PC*MILER what type of data is in that column.

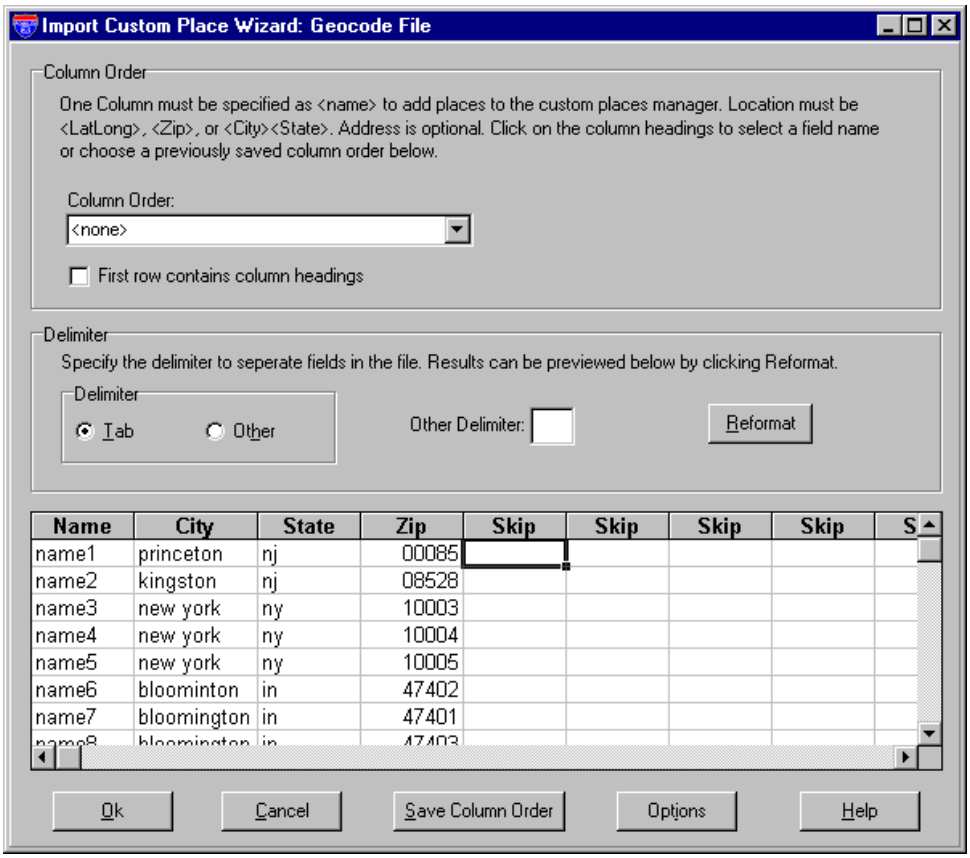
To adjust column width in the table for better visibility, move your cursor over the column margin between two headings. Hold down your left mouse button, slide the margin to the desired width, then let go.


Import Custom Place Wizard: Geocode File
Column Order
One Column must be specified as <name> to add places to the custom places manager. Location must be <LatLong>, <Zip>, or <City><State>. Address is optional. Click on the column headings to select a field name or choose a previously saved column order below.
Column Order:
<none>
First row contains column headings
Delimiter
Specify the delimiter to seperate fields in the file. Results can be previewed below by clicking Reformat.
Delimiter
Tab
Other
Other Delimiter:
Reformat
Skip Skip Skip Skip Skip Skip Skip Skip
name1 princeton nj 08540
name2 kingston nj 08528
name3 new york ny 10003
name4 new york ny 10004
name5 new york ny 10005
name6 bloomington in 47402
name7 bloomington in 47401
Ok
Cancel
Save Column Order
Options
Help

Import Custom Places – Geocode Window

The **Delimeter** option tells PC*MILER how to recognize where each new column should start in the file you are importing. The data in your import file can be separated by a **Tab** (this is the default option) or any other character of your choosing. However, **you cannot combine different types of separators**. To use a delimiter other than a tab, click **Other**, then type the character you want to use in the **Other Delimiter** box and click **Reformat**. Then scroll the table to check it. In order for PC*MILER to process your records, they must be aligned correctly in the table.

Initially, all columns will be labeled **Skip**, meaning that PC*MILER is not sure what type of data is in each column. Click on each column heading and choose an appropriate category from the pop-up menu. Possible data categories are: **Name** (your custom names), **City**, **State**, **LatLong, ZipCode**, and **Skip**. Highlight a category on the menu, then click again to select it. Each of the categories can be applied to only one column, with the exception of **Skip**.


Import Custom Place Wizard: Geocode File
Column Order
One Column must be specified as <name> to add places to the custom places manager. Location must be <LatLong>, <Zip>, or <City><State>. Address is optional. Click on the column headings to select a field name or choose a previously saved column order below.
Column Order:
<none>
First row contains column headings
Delimiter
Specify the delimiter to seperate fields in the file. Results can be previewed below by clicking Reformat.
Delimiter
Tab
Other
Other Delimiter:
Reformat
Name City State Zip Skip Skip Skip Skip
name1 princeton nj 00085
name2 kingston nj 08528
name3 new york ny 10003
name4 new york ny 10004
name5 new york ny 10005
name6 bloominton in 47402
name7 bloomington in 47401
Ok
Cancel
Save Column Order
Options
Help

Geocoding Window with Formatted Column Headers

⇒ **NOTE:** See section 3.8 for the correct way to format latitude\longitude points. See section 3.2 for all other stop entry formats that are accepted by the Import Custom Place Wizard.

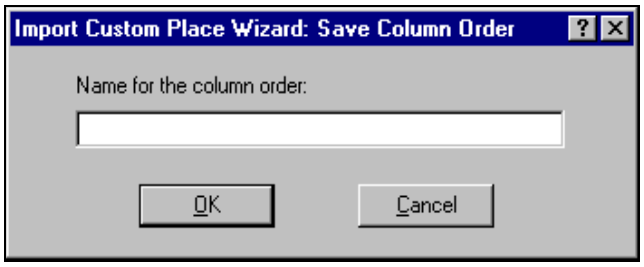
A custom name column and a location column **must** be specified to add places to the Custom Place Manager. So, one of the columns must be labeled **Name**. The location can be specified by labeling **City** and **State** columns, a **LatLong** column, and\or a **Zip** column. (PC*MILER can determine all location information from any of these entries, exactly like entering a stop in the route entry window.)

Label a column **Skip** if the data contained within it is information that should not be read by PC*MILER (for example, memos or descriptions). When processing custom places, PC*MILER will ignore the data in columns with this heading. More than one column can be labeled **Skip**.

If the first line of the data file that you imported contains column headings, check **First row contains column headings** in the **Column Order** section of the window. This instructs PC*MILER to ignore that first row of

information, and exclude it from the table. You will still need to specify columns that PC*MILER can recognize as described above.

To save yourself time in the future, you can save your current column settings. Once you are happy with your settings, click **Save Column Order** at the bottom of the window. Give a name to your template in the prompt that appears.



The name of your template can be a maximum of 128 characters. It can contain spaces, and any type of character. After typing a name, click **OK**. The next time you open the Geocode File window, your template settings will be available. To apply a saved template to data currently displayed in the table, select the template's name from the **Column Order** drop-down listbox.

Clicking on the **Options** button will open the Geocoding Options dialog box (see section 3.14.2 below).

When you are finished with the geocoding settings, click **OK**. PC*MILER will now begin processing your data records (see section 3.14.3).

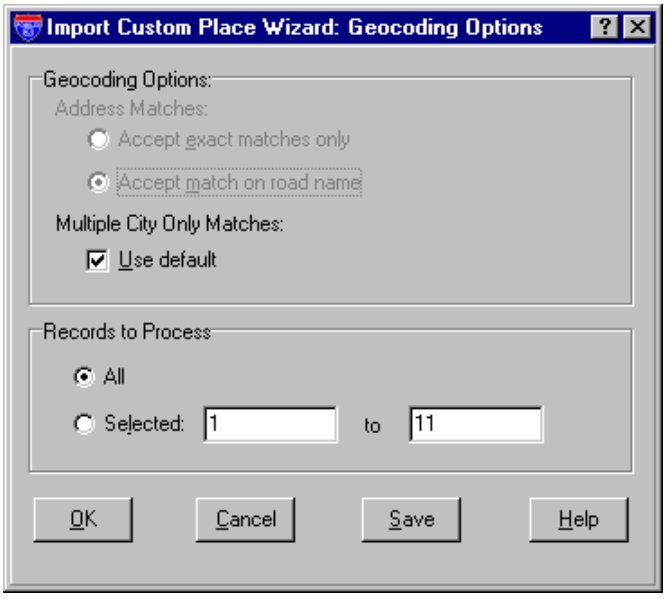
3.14.2 Geocoding Options Dialog Box

Clicking **Options** in the Geocode File window activates the Geocoding Options dialog. These settings determine which of your records will be processed and how multiple cities that have the same name will be handled.

When your **City** and **State** columns are listed without an accompanying ZIP code, the **Multiple City Only Matches** option tells PC*MILER how to look for ZIP codes. If you check *Use Default*, PC*MILER will select the first of the matching ZIP codes in its database. If this box is not checked, PC*MILER will consider this record to be a non-match with its database.

The options under **Records to Process** determine how many and which rows of data will become custom places. Select **All** to have all the data

processed, or **Selected** to process only some of the records. If you choose **Selected**, enter the range of records to be processed.



Geocoding Options Dialog Box

Clicking on the **Save** button will make these the default settings in the Import Custom Place Wizard.

Click **OK** to save your geocoding criteria and return to the Geocode File window (see previous section), or click **Cancel** to discard your changes.

3.14.3 Processing Data Matches

While your records are being processed, the progress of the data matching and its success rate will be displayed and updated on your screen.

At the top of the **Results** window these calculations will be displayed:

- **Total Records** - The total number of records that have been processed.
- **Total Geocoded** - The total number of records that have been successfully matched with a location in the PC*MILER database. Beside this number (in parentheses) is the percentage of the total records that have been matched.
- **Seconds/Record** - The average time spent on processing each record.

- **Elapsed Time** - The time elapsed since the start of the record matching process.

The **Confidence**, **Num Records**, and **% of Records** indicate how many records were successfully processed and how many failed (a match was not found in the database). **100%** confidence indicates a successful match, **0%** confidence indicates a failure, and mid-range confidence levels indicate a partial match.

You can stop the processing of data at any time by clicking the **Cancel** button. The results of your search up to the point at which you canceled will not be discarded, they will be displayed in the activated **Results** window (see section 3.14.4 below).

When processing is done, you can expand the Results window to see detailed information about each record that was processed (see below).

3.14.4 Adding Data Records to PC*MILER

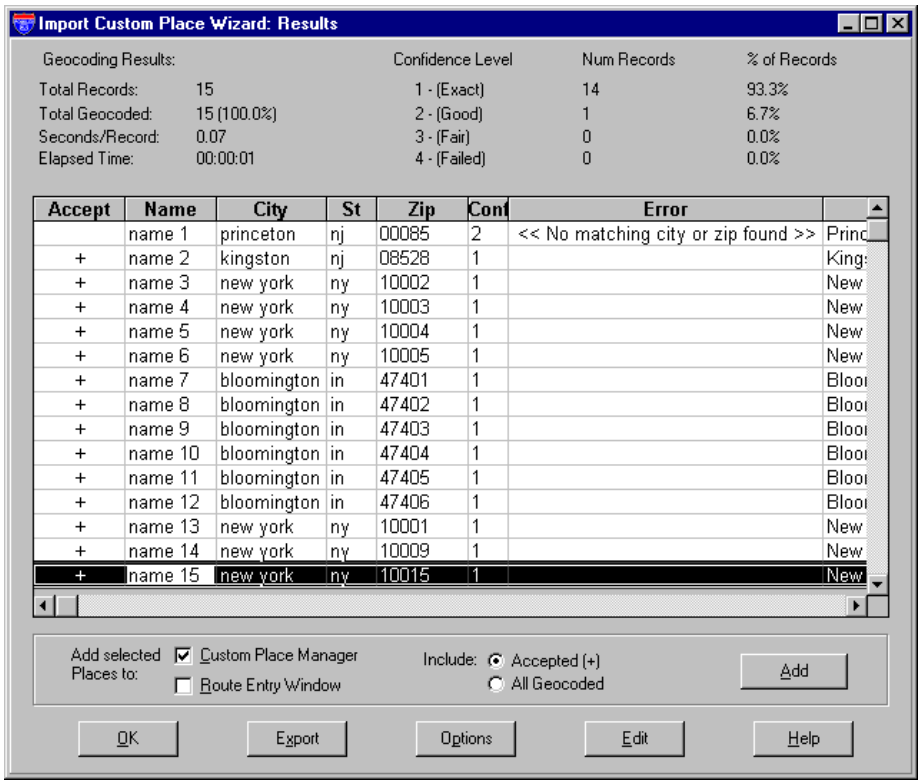
Once the data matching process is complete, the **Results** window is activated. This dialog allows you to view the results, add the geocoded records to PC*MILER's list of Custom Places, and set guidelines for adding these records. Expand the size of the window if necessary for a better view of its contents.

You can click **OK** at any time in the Results window to close the Import Custom Place Wizard, but **closing the window will mean losing your import results.**

In the Results window, a record with a plus sign in front of it (**+**) was successfully matched with a stop in the PC*MILER database. A record without a plus sign was not matched with any stops in the database.

In the Results window, the records in each column can be sorted. (They will sort either alphabetically and\or numerically, depending on the contents of the column.) Click on a column heading to sort the column. Clicking again will toggle between ascending and descending order.

To adjust the column widths for better visibility, place your cursor over the margin of a column heading that you want to adjust (the cursor will become an arrow). Now hold down your left mouse button, slide the margin to the desired width, and let go of the button.


Import Custom Place Wizard: Results
Geocoding Results:
Confidence Level
Num Records
% of Records
Total Records: 15
1 - (Exact) 14 93.3%
Total Geocoded: 15 (100.0%)
2 - (Good) 1 6.7%
Seconds/Record: 0.07
3 - (Fair) 0 0.0%
Elapsed Time: 00:00:01
4 - (Failed) 0 0.0%
Accept Name City St Zip Conf Error
name 1 princeton nj 00085 2 << No matching city or zip found >>
+ name 2 kingston nj 08528 1
+ name 3 new york ny 10002 1
+ name 4 new york ny 10003 1
+ name 5 new york ny 10004 1
+ name 6 new york ny 10005 1
+ name 7 bloomington in 47401 1
+ name 8 bloomington in 47402 1
+ name 9 bloomington in 47403 1
+ name 10 bloomington in 47404 1
+ name 11 bloomington in 47405 1
+ name 12 bloomington in 47406 1
+ name 13 new york ny 10001 1
+ name 14 new york ny 10009 1
+ name 15 new york ny 10015 1
Add selected Places to:
Custom Place Manager
Route Entry Window
Include:
Accepted (+)
All Geocoded
Add
OK
Export
Options
Edit
Help

Geocoding Results Window

Several columns in the Results table display information about the success or failure of each record as it was processed. (If you cannot see all the columns, scroll horizontally using the scroll bar, adjust the column widths, or expand the window itself.) These columns are:

- **Accept**- If a cell in this column contains a plus sign (**+**), then the record will be imported as a custom place into PC*MILER. If a cell is empty, then the record will not be imported.

  To change the acceptance status of a matched record, click on the record's **Accept** cell to toggle the plus sign. It is also possible to change the acceptance status of an unmatched record. See the description of the Edit Custom Place dialog box in section 3.14.5 below.

- **Conf**- This column shows the confidence level of each record's match. **1** = successful match, **4** = no match found.

- **Error**- If a record failed, this column will tell you why.

- **Match-** This column tells you which city was a match in the PC*MILER database.

Choose where you want to send your selected records by setting the **Add selected place to** options at the bottom of the window. Check **Custom Place Manager** if you want to add the records to PC*MILER's list of custom places, or clear the check box if not. Check **Route Entry Window** if you want to enter these places as stops in the active route entry window. At least one of these options must be selected.

Select one of the two **Include** options to determine which records will be added. If **Accepted [+]** is selected, then all records categorized as such will be added. If **All Geocoded** is selected, then all the records that were matched with a database stop will be added.

To edit a record, highlight it and click the **Edit** button to open the Edit Custom Place dialog box. (See the next section for more information.)

Clicking on the **Options…** button will open the **Custom Place Manager Options** dialog box that enables resolution of various data conflicts and errors when importing custom places. (See section 3.14.6 for more information).

When you are satisfied with all of your settings in the Results window, click **Add** to import your custom places to the PC*MILER database.

Once your custom places have been imported into PC*MILER, the Custom Place Manager will open and you will be able to see your new custom places added to the list. Click **OK** to save your imported custom places. If you click **Cancel**, the custom places you imported will be discarded.

If you would like to save the information in the Results window as either a text file or an Excel file, click the **Export** button.

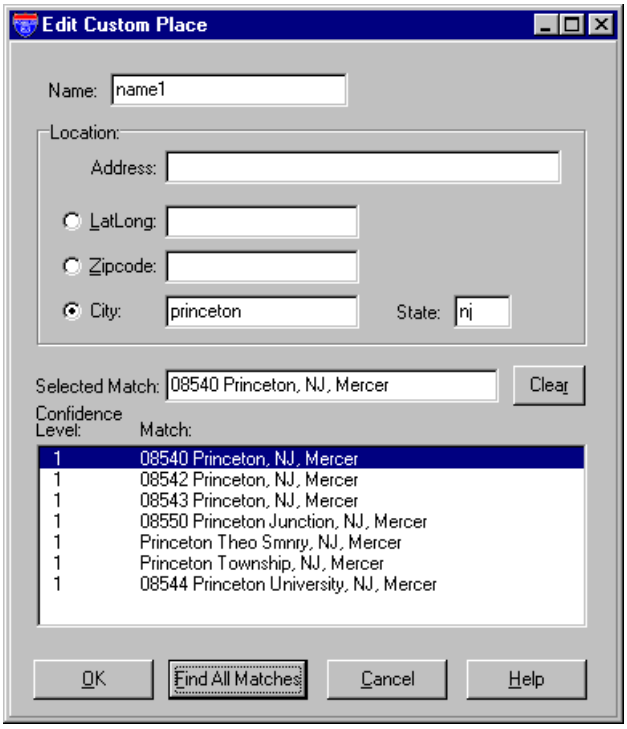
3.14.5 Editing Custom Place Records

To edit a record, highlight it in the Results window and click the **Edit** button to open the Edit Custom Place dialog box.

At the top of this dialog box are **Name** and **Location** fields that display the contents of each field in the highlighted record. You can enter the first few characters of a faulty ZIP code or city name and then click **Find All Matches** to obtain a list of possible matches and their confidence levels. For example, type "085" in the **Zipcode** field and get a list of all ZIPs that begin with "085".

To change the database match for a record, select a new match by highlighting it on the list of possible matches. The **Selected Match** field

will display the location you highlight. To enter the Selected Match in the Results window, either click on **OK** or press **<Enter>**. In the Results window, this record will now be marked as **Accepted**. Clicking **Cancel** will discard any changes made in the Edit Custom Place dialog and return you to the Results window.



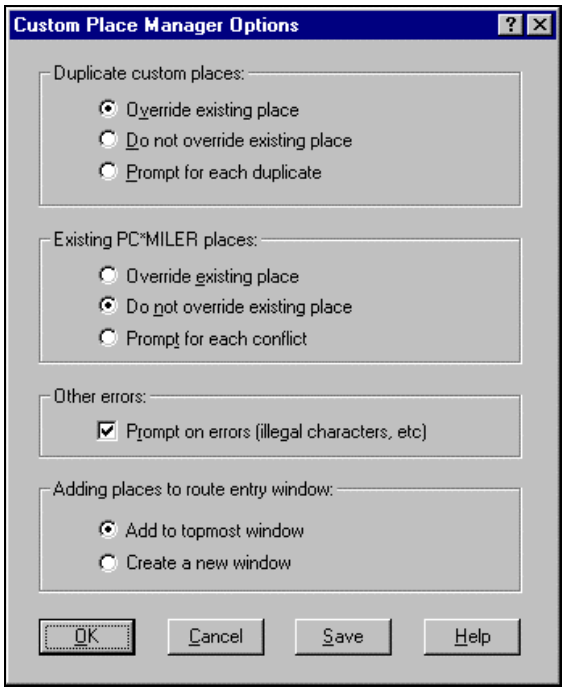
Edit Custom Place Dialog Box

To mark your selected record as unaccepted, click the **Clear** button. This will make the record appear in the Results window with a confidence level of 0%.

⇒ **NOTE:** You can select multiple records to edit in the Results window using the **Shift** or **Ctrl** key. You can only edit one record at a time, but when you click **OK** to add your edit, the Edit Custom Place dialog will remain open and the next record you selected will appear.

3.14.6 Custom Place Manager Options

Clicking **Options…** in the Results window will open the Custom Place Manager Options dialog box. This dialog enables resolution of various data conflicts and errors that may occur when importing custom places.



Custom Place Manager Options Dialog Box

The **Duplicate Custom Places** option tells PC*MILER what to do when one of your custom places has the same name as an already existing custom place. If **Override existing place** is selected, your new custom place will override the one already in the database. If **Do not override existing place** is selected, then the older custom place will remain intact, and your new custom place will be discarded. If **Prompt for each duplicate** is selected, then PC*MILER will post a message each time a duplicate is found, and ask you which record should be retained.

The **Existing PC*MILER Places** option tells PC*MILER what to do when record data somehow conflicts with what already exists in the database (e.g. if you entered **08540**, the ZIP code of Princeton, NJ, with the city/state **Los Angeles, CA**.) If **Override existing place** is selected, your new custom place will override the one created in PC*MILER. If **Do not override existing place** is selected, then the older custom place will remain intact, and the PC*MILER custom place will be discarded. If **Prompt for each conflict** is selected, then PC*MILER will post a message each time a conflict is found, and ask you which record should be retained.

When **Prompt on errors** is selected, PC*MILER will bring to your attention records that have errors (such as illegal characters), and ask you if you want to keep or discard them. If this option is not selected, then the faulty records will automatically be discarded.

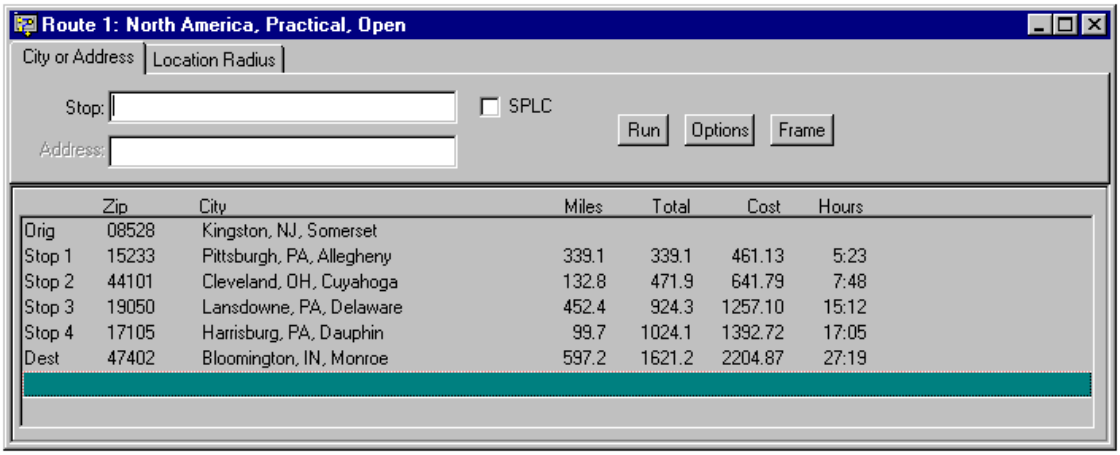
The **Adding places to route entry window** option tells PC*MILER which window to add selected places to when **Route Entry Window** is selected in the **Results** window. If **Add to topmost window** is selected, then the selected places will be added to the route entry window that is currently active. If **Create a new window** is selected, then a new route entry window will be opened, and the selected places will be added to it.

Clicking on the **Save** button will make these the default settings in the Import Custom Place Wizard. Click **OK** to accept your changes in this dialog box, and **Cancel** to discard the changes. You will be returned to the **Results** window (see section 3.14.4).

3.15 Running a Route

For a route to be generated, there must be a valid origin and at least one valid stop entered in the route entry window. To generate the route, click on the **Run** button in the route entry window (or press the **<F10>** key or choose *Run* from the Route menu).

Mileages and time and cost estimates will appear to the right of each stop on the list. The default route type in PC*MILER is the Practical Route.


Route 1: North America, Practical, Open
City or Address
Location Radius
Stop:
Address:
SPLC
Run
Options
Frame
Zip City Miles Total Cost Hours
Orig 08528 Kingston, NJ, Somerset
Stop 1 15233 Pittsburgh, PA, Allegheny 339.1 339.1 461.13 5:23
Stop 2 44101 Cleveland, OH, Cuyahoga 132.8 471.9 641.79 7:48
Stop 3 19050 Lansdowne, PA, Delaware 452.4 924.3 1257.10 15:12
Stop 4 17105 Harrisburg, PA, Dauphin 99.7 1024.1 1392.72 17:05
Dest 47402 Bloomington, IN, Monroe 597.2 1621.2 2204.87 27:19

Generated Route in the Route Entry Window

3.16 Generating Multiple Routes

For comparison purposes, you may want to route through different locations while keeping the routes you already generated. You can do this by simply opening a new route entry window for each route you run.

Use the *New Route* command in the File menu or click on the **New Route** button on the tool bar. Or you may want to duplicate an existing route in a new window for editing (see section 3.17 below).

You may keep up to eight route entry windows open simultaneously. The active route window will have a highlighted title bar at the top. All routes will be drawn in different colors in the RouteMap window when it is open. Use the Route Legend to identify each route (select **Legends** from the Map menu).

Reports can be run for each generated route. Each report will appear in a separate window. Using the Windows menu can help you find and activate a route or report window when you have multiple windows open.

3.17 Duplicating a Route for Easy Comparison

To duplicate an open route (one that you've already entered), choose *Duplicate Route* from the File menu either before or after the route has been run. A new route entry window opens that contains your duplicated route. This option makes it easy to compare different route types (for instance, Shortest and Practical) for the same route.

3.18 Framing a Route on the Map

To frame a route on the map, simply click the **Frame** button in the route entry window after the route has been generated. For more on framing routes and geographic areas, see section 5.8.

3.19 Location Radius

PC*MILER now includes a Location Radius tool for easier rate determination and trip planning. Using the **Location Radius** tab in the route entry window, you can find every place, ZIP code, custom place, and\or point of interest within a specified radius around any location.

To use this tool, click on the **Location Radius** tab, then:

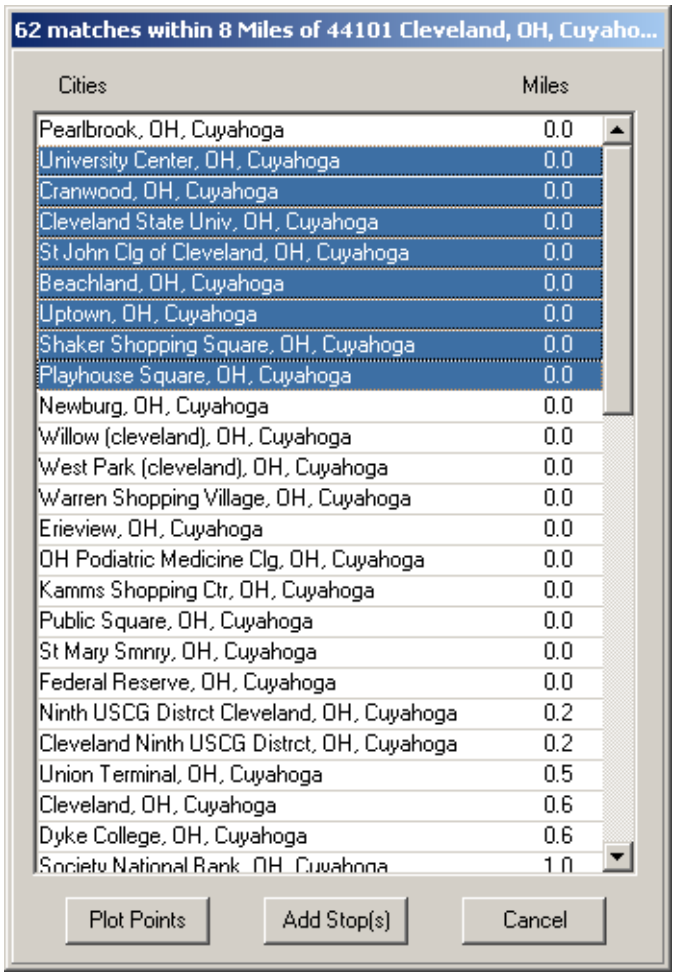
1. Enter a location in the **City** field. All formats that can be entered in the City or Address tab will be accepted here (city\state, ZIP code, latitude\longitude, custom place, point of interest, etc.). If a stop is

highlighted on the stop list, the information for that place will fill in automatically.

2. Select which types of places to include in the search by clicking the appropriate **Place Type** check boxes. If **POIs** is checked, the **Categories** list will be active and a category of POIs can be chosen.

3. Enter a number of miles for the radius, then click **Find**.

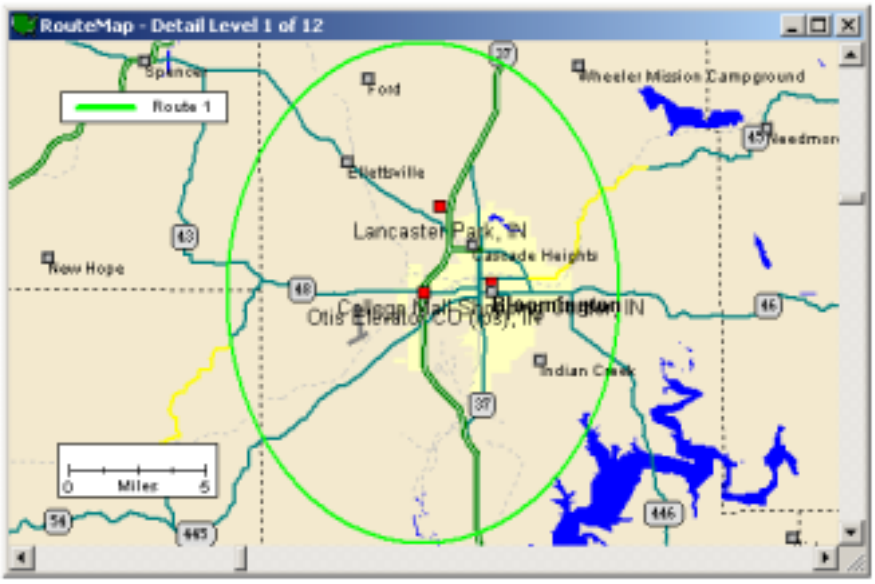
All matching places will appear on a pick list in a separate window. You may highlight one, several, or all matching places to add as stops to the active trip. Highlight the one(s) you wish to select, using the **Shift** or **Ctrl** key to pick multiple places (use **<Ctrl-A>** for all). Then click the **Add Stop(s)** button. If a stop is highlighted on the stop list, the matching places you select will replace it.


62 matches within 8 Miles of 44101 Cleveland, OH, Cuyaho...
Cities
Miles
Pearlbrook, OH, Cuyahoga 0.0
University Center, OH, Cuyahoga 0.0
Cranwood, OH, Cuyahoga 0.0
Cleveland State Univ, OH, Cuyahoga 0.0
St John Clg of Cleveland, OH, Cuyahoga 0.0
Beachland, OH, Cuyahoga 0.0
Uptown, OH, Cuyahoga 0.0
Shaker Shopping Square, OH, Cuyahoga 0.0
Playhouse Square, OH, Cuyahoga 0.0
Newburg, OH, Cuyahoga 0.0
Willow (cleveland), OH, Cuyahoga 0.0
West Park (cleveland), OH, Cuyahoga 0.0
Warren Shopping Village, OH, Cuyahoga 0.0
Erieview, OH, Cuyahoga 0.0
OH Podiatric Medicine Clg, OH, Cuyahoga 0.0
Kamms Shopping Ctr, OH, Cuyahoga 0.0
Public Square, OH, Cuyahoga 0.0
St Mary Smnry, OH, Cuyahoga 0.0
Federal Reserve, OH, Cuyahoga 0.0
Ninth USCG Distrct Cleveland, OH, Cuyahoga 0.2
Cleveland Ninth USCG Distrct, OH, Cuyahoga 0.2
Union Terminal, OH, Cuyahoga 0.5
Cleveland, OH, Cuyahoga 0.6
Dyke College, OH, Cuyahoga 0.6
Society National Bank, OH, Cuyahoga 1.0
Plot Points
Add Stop(s)
Cancel

Pick List of Matches

To plot all matching places on the map, click **Plot Points**. To clear these points after they are plotted, you can either 1) delete the current trip, or 2) click **Find** for a new search.

NOTE: The maximum number of matching places that can be displayed after you execute the search is 250. In some cases you may need to specify a smaller radius to get a complete list of matches. The title bar of the search results window will show how many places are displayed on the list versus total places found, e.g. "250 of 864 total matches…".



Plotted Points on the Map

4.0 OPTIONS and ADDITIONAL FEATURES

The following advanced options and features are available in PC*MILER and are covered in this chapter:

- State\Country Distance Summary
- Detailed Driving Instructions
- Comparison Report
- PC*MILER Report Customization
- Copy Report\Map to Clipboard or File
- Route Parameters Editing
- Cost and\or Time Estimation for Empty\Loaded Miles
- User Defined Stop-Off Time and Cost
- User Defined Break Time
- Route Optimization
- Reversal of Stop Order
- Hub Distance Generator
- Custom Place Importing
- Trip Saving and Retrieval
- Route Customization
- Hazardous Material routing options

4.1 State\Country Distance Summary Report

After a route is generated, you can click on the **State Report** button on the tool bar (or press the **<F6>** key or select *State**Country* from the Reports menu) to display a table summarizing mileages by state and country (US, Canada or Mexico) traveled. Toll\free, empty\loaded, and ferry mileages are listed in addition to total miles.

4.1.1 Order of States in the State\Country Distance Summary Report

In the State\Country Distance Summary Report, the states and countries are normally displayed in alphabetical order (this is the default order, shown in the illustration on the next page). To display them in the order in which the route travels through them, click on the **Options** button in the route entry window and choose **Route Order** under **Order Report**. States\countries will now appear on the report as they would in a driver log.

Route 1: State/Country Distance Report

Stop		Leg Miles	Total Miles	Leg Cost	Total Cost	Leg Hours	Total Hours
02205	Boston, MA, Suffolk	0.0	0.0	0.00	0.00	0:00	0:00
04101	Portland, ME, Cumberland	110.1	110.1	149.79	149.79	1:45	1:45
	Montreal, QC	280.9	391.0	382.00	531.79	4:55	6:40

	State/Country	Total	Toll	Free	Ferry	Loaded	Empty
	MA	44.9	0.0	44.9	0.0	44.9	0.0
	ME	103.5	36.8	66.7	0.0	103.5	0.0
	NH	82.9	12.1	70.8	0.0	82.9	0.0
	VT	60.1	0.0	60.1	0.0	60.1	0.0
	US	291.4	48.9	242.6	0.0	291.4	0.0
	QC	99.6	0.0	99.6	0.0	99.6	0.0
	Canada	99.6	0.0	99.6	0.0	99.6	0.0
	TOTAL	391.0	48.9	342.2	0.0	391.0	0.0

State\Country Distance Report

4.2 Detailed Route Report (Driving Instructions)

After generating a route, click on the **Detail Report** button on the tool bar (or press the **<F5>** key or select *Detailed* from the Reports menu) to display detailed driving instructions as shown below:

Route 1: Detailed Route Report

State/Country		Route	Miles	Hours	Interchange	Leg Miles	Leg Hours	Total Miles	Total Hours
PA	Bear left	Ramp	0.2	0:01	+ Ramp I 70	131.4	2:07	559.1	9:39
PA	$ West	I 70 (I 76)	23.1	0:21	Time break on I 70	154.4	2:28	582.2	10:00
Time Break: On-duty 10:00									
Break Wait Time: 8:00									
PA	$ West	I 70 (I 76)	74.3	1:09	+ I 70 Ramp	228.7	11:37	656.5	19:09
PA	Bear right	Ramp	0.9	0:03	+ Ramp I 376	229.6	11:39	657.4	19:11
PA	West	I 376 (US 22)	14.4	0:13	+ I 376 Ramp	244.0	11:53	671.7	19:24
PA	Straight	Ramp	0.0	0:00	+ Ramp I 279	244.0	11:53	671.8	19:25
PA	West	I 279 (US 19)	0.0	0:00	+ I 279 Local	244.0	11:53	671.8	19:25
PA	Right	Local	0.1	0:00	Pittsburgh, PA, 15233	244.1	11:53	671.9	19:25
Arrive Loaded									
Stop 7: 15233 Pittsburgh, PA, Allegheny				**0:00**	**(On-duty) 0.00**	**244.1**	**11:53**	**671.9**	**19:25**

Detailed Route Report

The columns from left to right in the Detailed Route Report give you the following information for each route segment: state, toll or free road, turn

direction, route (including exit number where available), segment distance, driving time, interchange point, leg mileage and time, cumulative trip mileage and total trip time.

A dollar sign (**$**) marks segments that are toll roads. Height and weight restrictions are noted where they exist.

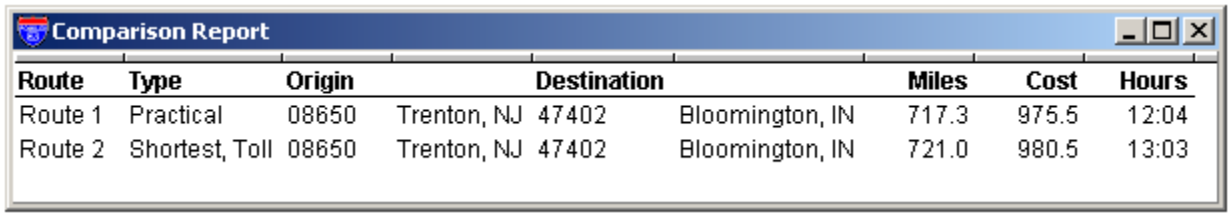
This report may also include a time and cost for each stop, the empty\loaded status for each leg, a border wait time, and the time at which a break should be taken if the number of on-duty hours allowed between breaks was specified for the route. Stop times and costs, empty\loaded mileages, a border wait time, and break time information are calculated using input you may enter or edit in the Options dialog box (see section 4.6).

The Detailed Route Report for routes generated with PC*MILER|HazMat (available as an add-on data module) includes a **Restrictions** column. If you generate a route using one of the hazardous material route types, restricted route segments in this column will be labeled with the appropriate HazMat restriction type. Routes designated as preferred for hazardous materials will not be indicated on the report.

For convenience, the state-by-state distance breakdown is listed at the bottom of the Route Report.

4.3 Comparison Report

Choose *Comparison* from the Report menu or click on the **Comparison Report** button on the tool bar to create a Comparison Report that lists the total mileage and cost and time estimates for all generated, currently open routes.



Route	Type	Origin		Destination		Miles	Cost	Hours
Route 1	Practical	08650	Trenton, NJ	47402	Bloomington, IN	717.3	975.5	12:04
Route 2	Shortest, Toll	08650	Trenton, NJ	47402	Bloomington, IN	721.0	980.5	13:03

Comparison Report

4.4 Printing Reports

To print a report, choose *Print Report...* from the File menu or click on the **Print** button on the tool bar **while the window containing the report is active**. Reports that can be printed include the Detailed Route Report, State\Country Distance Summary Report, Comparison Report, and the mileage report in the route entry window that appears after a route is generated.

Before printing, you may want to use the Page Setup dialog box to control the general appearance of your report. The Page Setup dialog box is a standard Windows feature and can be opened by selecting *Page Setup...* from the File menu.

⇒ **NOTE:** In the Page Setup dialog box, **Fit To Page** is the default format; the other page setup options are disabled when this is selected. Click **Fit To Page** off to activate the other page setup options.

4.4.1 Changing the Font in Your Report

To change the appearance of your report by changing the font, choose *Font...* from the Report menu. This will open a dialog box that allows you to change the size and style of the characters in your report as you would in any Microsoft Windows document.

4.4.2 Changing the Column Width in Your Report

Because there is no limit to the number of characters allowed in a stop name, road name, or intersection, sometimes the names can be quite long. Often these long names are cut off when a report is generated. By adjusting the width of the columns in the report, you can display any information which was previously hidden.

To accommodate a full name, adjust the width of the columns by clicking and dragging the column tabs. The tabs are located directly beneath the window's title bar:

A Report Title Bar with Tabs

4.5 Saving and Copying Reports

PC*MILER reports can be saved to disk by choosing *Save to File...* from the Report menu. Choose the folder in which you want your report file to be saved, and type a name for your file in the **File Name** field of the Save Report dialog box. If you wish to save the report in Microsoft Excel format, choose the **(*.xls)** file type under **List Files of Type**. Click on **OK** to save.

In addition, PC*MILER reports can be copied to the clipboard for use with other Windows programs such as Microsoft Excel. To copy a report, choose *Copy Report* from the Edit menu **while the window containing the report is active**.

⇒ **HINT:** Saving a report to an Excel file will retain all the original formatting (font style, color, spacing). Copying and pasting a report to an Excel file will retain the original columns and rows, but will not retain other formatting such as font style.

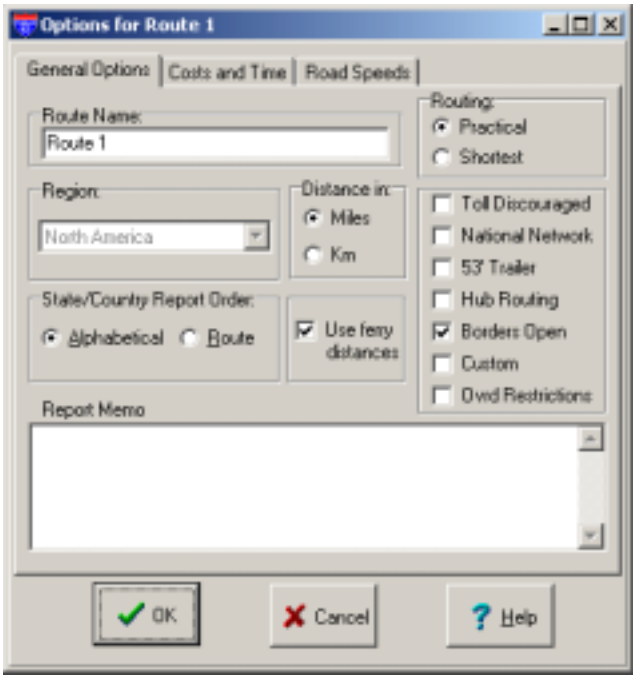
4.6 Using the Options Dialog Box

The Options dialog box enables you to change the options and parameters used to calculate a route. Click on the **Options** button in the route entry window, or choose *Options...* from the Route menu, to bring up the Options dialog box.

The Options dialog box gives you a number of choices, grouped in “tabs”. Tabs are like file folders within a dialog box; that is, when you click on a tab, a new section of the dialog box opens. **General Options**, **Costs and Time**, and **Road Speeds** are the tabs in the Options box. (Users of PC*MILER|HazMat will have an extra tab, labeled **Hazardous Routing**.) Route parameters in each tab of the Options dialog are described in detail on the following pages.

When you edit a parameter in the Options dialog box, all subsequent routes that are run from the currently active route entry window will use those parameters. **If you open a new route entry window, routes you run in it will use the default options.** Note that if you save a route, the options that were active for that route will be saved along with it.

General Options



Options Dialog Box, General Options Tab

4.6.1 Route Name

(Click on the **General Options** tab.) You can use the **Route Name** field to assign a name to your route that will appear on the title of the route window, report windows, and map. This prevents confusion when working with multiple route entry windows, and enables you to include a route name in the title of your reports.

4.6.2 Routing

(Click on the **General Options** tab.) The two basic route types that PC*MILER can generate are **Practical** and **Shortest**. A Practical or Shortest route can be run in combination with one or more of three other types of route calculations: **Toll Discouraged** and **National Network** or **53' Trailer**. (**NOTE:** National Network cannot be combined with 53' Trailer routing, they are mutually exclusive.) For a detailed description of all five route types, see Chapter 1, sections 1.5.3 through 1.5.8. The route type(s) you select will appear in the title of the route entry window. Changing the route type may affect the time and cost estimates that are calculated for any given route.

Below the route types is a checkbox for **Hub Routing**. Click on it to choose "Hub" mode. Using the Hub distance generator, it's possible to generate mileages from one origin to a virtually unlimited number of destinations which you enter as stops. See Chapter 4, section 4.10, *The Hub Distance Generator*.

You may also toggle the **Borders Open** option. This option refers to Intra-US, Intra-Canada, and Intra-Mexico routing. If Borders Open is checked, the route you generate will ignore international boundaries when necessary to come up with the best route. If this option is not checked, the borders will not be crossed; for example, if all your stops are in the United States, the resulting route will stay in the United States even though the most practical or shortest route would normally involve some Canadian mileage. “Open” or "Closed" will appear in the title of each route entry window, indicating which option is selected.

If you check the **Custom** box, the route you run will take into account the road, state, and override preferences found in the Custom Roads Manager. "Custom" will appear in the title of the route entry window when Custom routing is turned on. See Chapter 5, sections 5.5 and 5.6. **This box must be checked for road preferences to be active when running routes.**

In addition to the five basic PC*MILER route types, a Heavy and Light Vehicle routing option is now offered. The **Override Restrictions** check box in the Options dialog controls this setting. When “Override Restrictions” is left unchecked, *Heavy Vehicle* routing is in effect, so both **truck-prohibited and truck-restricted roads will always be avoided**. In addition, Heavy Vehicle routing takes nationwide **13’ 6” height restrictions** into account. A heavy vehicle is one weighing at least **80,000 pounds**; a light vehicle weighs less than **80,000 pounds**.

Checking **Override Restrictions** activates the *Light Vehicle* option. With Light Vehicle routing active, truck-prohibited roads will always be avoided, but truck-restricted roads are considered for a route. (PC*MILER normally gives preference to Interstates, major highways, and major thru-roads where possible.)

4.6.3 Distance in (Miles\Kilometers Conversion)

(Click on the **General Options** tab.) Choose whether the distances you generate will be in **Miles** or **Kilometers**. This will affect trip costs, average road speeds, and the distances shown on reports and in the route entry window when you generate a route.

4.6.4 Use Ferry Distances

(Click on the **General Options** tab in the Options dialog box.) Click on **Use ferry distances** to include ferry distances in mileage and cost calculations. When turned off, the ferry portion of a route will not contribute to the mileage and cost. The setting does not affect the actual route. Travel time is not affected.

⇒ **NOTE:** The "Total" column of the State\Country report always includes ferry distances. The other columns may or may not include ferries based on the status of this option.

4.6.5 State\Country Report Order

(Click on the **General Options** tab.) Choose whether the State\Country Distance Summary reports that you generate will have states\countries listed in **Alphabetical** order by state\country, or in the **Route** order. The default is alphabetical.

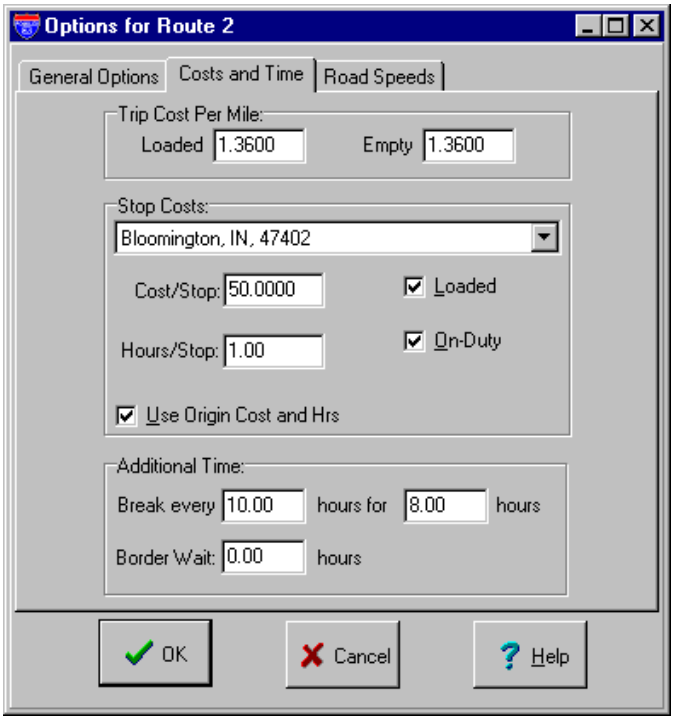
4.6.6 Report Memo (Customized Reports)

(Click on the **General Options** tab.) PC*MILER allows you to create custom reports by providing a **Report Memo** field. The text you type in this scrollable field will appear at the top of all printed reports. To go to a new line when you're typing, press **<Ctrl><Enter>** (if you press only the **<Enter>** key as you would in a word processing program, the Options dialog box will close).

4.6.7 Region

(Click on the **General Options** tab.) PC*MILER offers separate add-on data modules which allow you to expand your routing capability to other regions of the world. Click on the scroll arrow to open the **Region** pick list, then highlight and click on the region in which you will be determining your route. The standard version of PC*MILER includes most of the North American continent; therefore, **NA** is the default setting.

Costs and Time



Options Dialog Box, Costs and Time Tab

4.6.8 Trip Costs (Per-mile Cost for Empty and Loaded Miles)

(Click on the **Costs and Time** tab.) PC*MILER calculates a total cost for each route generated. This cost estimate is determined by multiplying a dollar amount per mile by the number of miles; additionally, costs for each individual stop on a route, defined as either a loaded move or backhaul, can be entered by the user (see section 4.6.8), and these will be added to the total cost estimate for the trip. The cumulative cost appears, along with the total mileage and time estimation, in the route entry window after the route is generated.

The **Trip Costs** fields enable you to assign per-mile costs for **Empty** and **Loaded** miles. The default cost for each is $1.36. Type over the defaults to enter your own figures. Note that if the measure of distance is set to **Kilometers** in the **General** tab, you will be entering $\kilometer rather than $\mile in these fields.

4.6.9 Stop Costs (Time and Cost Estimate for Individual Stops)

(Click on the **Costs and Time** tab.) The **Stop Costs** fields enable you to assign a time and cost estimate for each individual stop on the route. In the Stop Costs area you also indicate whether the stop time you entered is on-duty or off-duty, whether to include the time and cost estimate for the origin in the totals for the route, and whether the leg between stops is a loaded move or a backhaul.

Combined with the trip costs entered for loaded and empty miles, the Stop Costs fields determine the total cost estimate for the trip. (This estimate appears on reports and in the route entry window when you run the route.) As an example, if your route includes eight stops and you assign a 1-hour on-duty stop-off time estimate to each one, the total time estimate for the trip (driving time plus delay time at each stop) will reflect an increase of eight hours.

Stops must be entered in the route entry window (whether or not the route has been generated) for the Stop Costs fields to be active. All stops on the route will appear on a pick list that can be scrolled if necessary using the **up** and **down arrow keys** on your keyboard.

Click on the scroll arrow to open the pick list, then highlight and click on the stop to which you wish to assign a time and\or cost. Indicate whether the leg preceding the stop should be considered as **Loaded** (check if "yes"), whether the stop time should be considered **On-Duty** (check if "yes") and enter the cost and\or time estimate for the stop in the **Hours\Stop** and **$\Stop** fields. Click on the arrow to open up the pick list again and choose another stop. If you want the origin stop time and cost included in the totals for the route, check **Use Origin $ and Hrs** before closing the dialog box.

⇒ **NOTE:** If a **Break Time** is entered (see next section), the points at which breaks are indicated in the Detailed Route Report will be affected by whether the hours per stop (**Hours\Stop** field) are **On-Duty** for each stop.

The defaults for the Stop Costs fields are Loaded, On-Duty, $0.00 per stop, and 0 hours per stop using the origin time and cost in the total estimates.

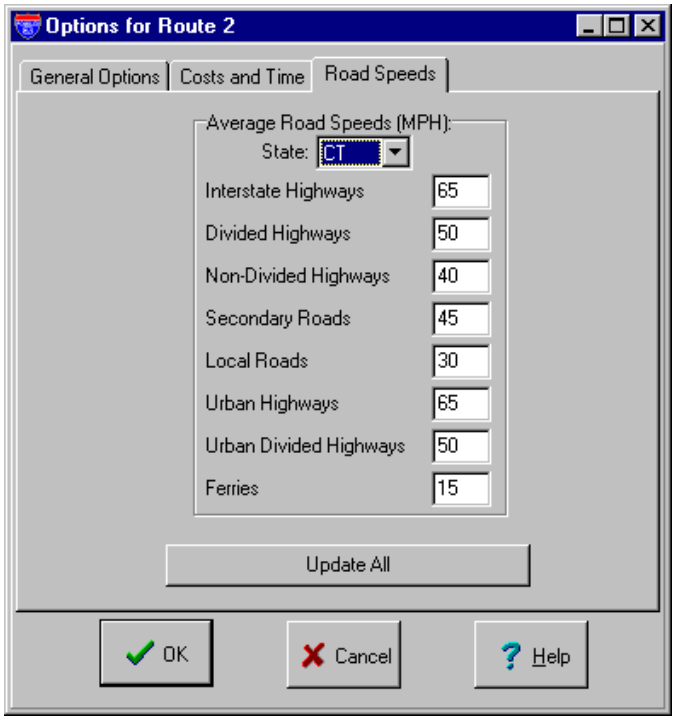
4.6.10 Additional Time

(Click on the **Costs and Time** tab.) In the **Break Time** fields, enter the number of on-duty hours allowed between breaks and how many hours each break should be. The numbers you enter will determine where breaks are indicated along the route in the Detailed Route Report.

Calculations of break times take into account whether time spent at each stop is on-duty (check **On-Duty** to count stop time). The default break time is 0 hours.

In the **Border Wait** field, enter any expected delay (in hours) due to border crossing. The number of hours you enter will affect time estimates for any trip that includes at least one international border crossing, and will be included in the Detailed Route Report.

Road Speeds



Options Dialog Box, Road Speeds Tab

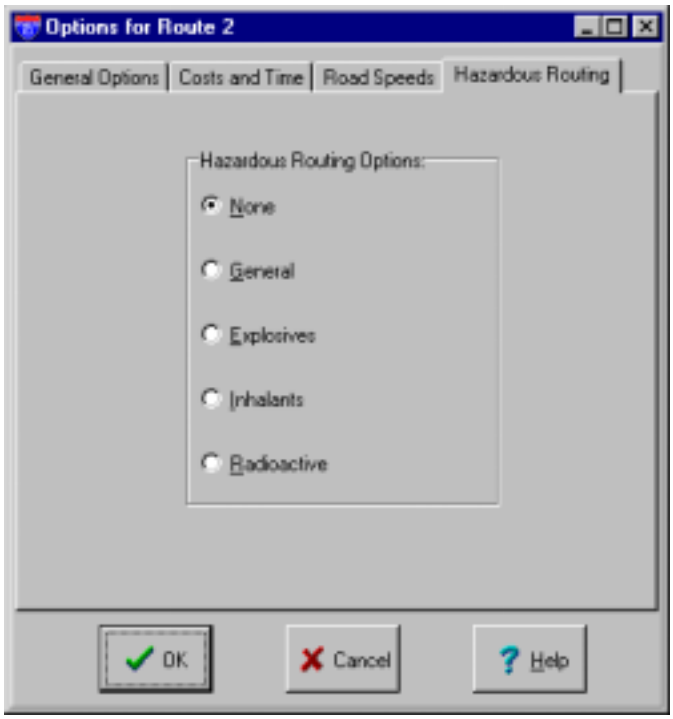
4.6.11 Average Road Speeds (Estimated Travel Time)

(Click on the **Road Speeds** tab) PC*MILER calculates a time estimation for each generated route. The time estimate is computed by summing up the estimated time traveled on each road segment for the route plus an added stop-off time for each stop along the route. Each road segment falls into one of eight road classes and each road class has a different average speed parameter assigned to it. Spreading the estimated average speed over the various road classes allows you to get a more

accurate estimate of the total time traveled based on the quality of the road used.

The Average Road Speeds parameters can be changed for each individual state to reflect your own estimates. To do this, click on the **Road Speeds** tab. Choose a state from the pick list (click on the arrow, then use the **Tab** key to scroll down the list until your choice is highlighted), then type over any defaults you want to replace with your own estimates. If you want the changes you make to apply to all states, click on **Update All**.

Hazardous Routing



Options Dialog Box, Hazardous Routing Tab

4.6.12 Hazardous Material Routing

If you purchased the separate PC*MILER|HazMat add-on data module, you can run routes for various types of hazardous materials using any PC*MILER route type. To select one of the route options available for hazardous materials, click on the **Hazardous Routing** tab in the Options dialog box.

PC*MILER calculates routes for hazardous materials based on over twenty different road categories and four route options. Route options include: **General**, **Explosives (1.1-1.3)**, **Inhalants**, and **Radioactive**. (Click on one option to select it.) To calculate normal PC*MILER routes, select **None**. Table 1 below shows how each route type handles the road categories, and Table 2 describes each road category.

TABLE 1: PC*MILER Hazardous Material Route Types and Road Categories

favor = routing will prefer these segments
no change = routing will not be altered in any way
avoid = routing will go around these segments whenever possible
discourage = a lesser degree of avoidance, used when certain Table 2 hazardous materials (less harsh) are permitted, either with no restrictions or in specified quantities only, or for tunnels

Road Category	Comments	General	Explosives	Inhalants	Radioactive
Alternate		favor	favor	favor	favor
Preferred		favor	favor	favor	favor
Designated		favor	favor	favor	favor
Prohibited		avoid	avoid	avoid	avoid
Restricted (table 1prohibit, table 2 restrict)		discourage	avoid	avoid	avoid
Explosives (1.1-1.3) Designated	CA only	no change	favor	no change	no change
Inhalants Designated	CA only	no change	no change	favor	no change
Explosive & Inhalant Designated	CA only	no change	favor	favor	no change
Tunnel	CFR397	discourage	discourage	discourage	discourage
Tunnel & Alternate	new	favor	favor	favor	favor
Tunnel & Preferred	new	favor	favor	Favor	favor
Tunnel & Designated		favor	favor	favor	favor
Tunnel & Prohibited		avoid	avoid	avoid	avoid
Tunnel & Restricted (table 1prohibited, table 2 restricted)		discourage	avoid	avoid	avoid
Designated & Preferred	new	favor	favor	favor	favor
Restricted & Prohibited	new	avoid	avoid	avoid	avoid
Radioactive Preferred		no change	no change	no change	favor
Radioactive Designated		no change	no change	no change	favor
Radioactive Restricted		no change	no change	no change	avoid
Radioactive & General Preferred		favor	favor	favor	favor

(continued on next page)

Explosives, Inhalant & Radioactive Designated	CA only	no change	favor	favor	favor
Radioactive & Explosive Designated	CA only	no change	favor	no change	favor
Explosives (1.1-1.3) Prohibited		no change	avoid	no change	no change
Exposives & Radioactive restricted	new	avoid	avoid	no change	no change

TABLE 2: PC*MILER Road Categories for Hazmat Routing

Alternate	Favorable routes designed to route hazmat around restricted segments
Preferred	States prefer transport of hazmat on these routes
Designated	Routes which should be used whenever possible for transport of hazmat
Prohibited	Routes in this category prohibit any amount of any placardable load of hazmat
Restricted (table 1 prohibit, table 2 restrict	Routes in this category generally prohibit any amount of table 1 hazmat and restrict table 2 (the less harsh hazmat)
Explosives (1.1-1.3) Designated	Routes which should be used for transport of explosives (1.1-1.3)
Inhalants Designated	Routes which should be used for transport of inhalants
Explosive & Inhalant Designated	Routes which should be used for transport of explosives (1.1-1.3) and\or transport of inhalants
Tunnel	These tunnels do not have any restrictions other than CFR397.9, which basically states that tunnels should not be used when a practicable alternative exists
Tunnel & Designated	These tunnels must be used, they are located on designated routes
Tunnel & Prohibited	Same as prohibited route
Tunnel & Restricted (table 1 prohibited, table 2 restricted)	Same as restricted route, these tunnel facilities often furbish manuals detailing the permissible amounts of hundreds of various hazmats
Radioactive Preferred	States prefer use of these routes for radioactive transport
Radioactive Designated	These routes should be used for radioactive transport
Radioactive Restricted	No radioactive transport is allowed, use alternate routes
Explosives, Inhalant & Radioactive Designated	Routes should be used for transport of explosive (1.1-1.3), inhalant, and\or radioactive

(continued on next page)

Radioactive & Explosive Designated	Routes should be used for transport of radioactive and\or explosive (1.1-1.3)

Explosives (1.1-1.3) **Prohibited**	These routes are prohibited for any amount of explosive (1.1-1.3)
Radioactive & General Preferred	Routes in this category are both preferred for general hazmat and especially preferred for radioactive; this category needs to exist in order to route radioactive loads properly in Colorado and Arizona

Note: Hazardous material routing restriction\designation information taken from *The National Hazardous Materials Route Registry* provided by the Federal Motor Carrier Safety Administration (FMCSA); and various other state and federal sources.

4.7 Creating Your Own Default Options

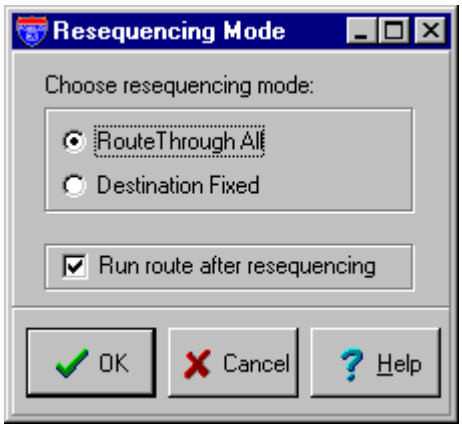
To change the default settings in the Options dialog box to ones that you use frequently, select *Default Options...* from the Route menu. Enter the desired default settings in the Default Options dialog box, which contains the same fields as the Options dialog box. Click on **OK** to save your settings. Every time you open a new route, the defaults that you set will be in effect. Note that default options will **not** be applied to saved routes when you open them.

4.8 Route Optimization (Resequencing)

Route Resequencing reorders all the stops in the active route entry window to minimize the total time (when using Practical routing), the total distance (when using Shortest routing), total toll distance (when using Toll Discouraged routing), and distance of the National Network (when using the National Network or 53' Trailer routing). In other words, resequencing a route gives you the optimal order of stops for your route.

The system will allow you to review the sequenced route and make any necessary changes before generating the distances and driving instructions. However, **resequencing cannot be undone**; i.e., the original order of stops cannot be recovered, so you may want to save the original route before resequencing. To interrupt sequencing at any time during processing, click on **Cancel**.

To resequence your route, choose *Resequence Stops...* from the Route menu or press the **<Alt-F10>** keys to bring up the dialog box shown below.



Resequencing Mode Dialog Box

The Resequencing dialog box gives you the following options:

- **Route Through All:** Allows PC*MILER to sequence the stops in any order, with the origin remaining fixed.
- **Destination Fixed:** Resequences stops, keeping the origin and destination the same.
- **Run route after resequencing:** Automatically generates the route when resequencing is finished.

⇒ **NOTE:** You need at least three stops to resequence with "**Route Through All**" and four stops for "**Destination Fixed**".

4.9 Reversing the Order of Stops

Choosing *Reverse Stops* from the Edit menu will reverse the order of all the stops that have been entered. This is especially useful when used in conjunction with the route resequencing feature described above.

For instance, say you need to make multiple pickups and you want to start at the farthest one on the route and end up at some other location for delivery. Enter the delivery location first, then enter your pickup points. Next, resequence your route and reverse the order of stops. This will put your farthest pickup point first on the list, and your delivery point last.

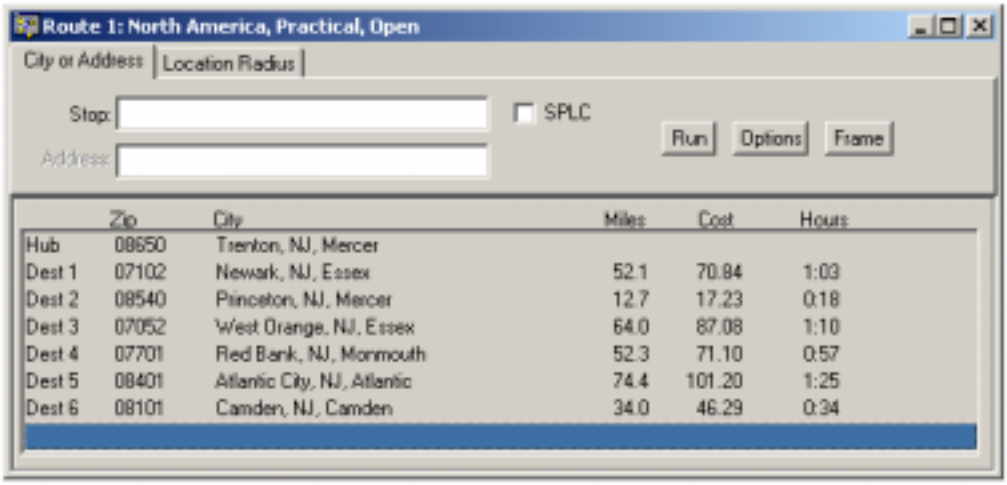
4.10 The Hub Distance Generator

PC*MILER enables you to generate mileages from one origin defined as the "Hub" to a number of destinations at the same time.

⇒ **NOTE:** Cumulative miles are not generated or displayed in Hub mode.

To generate a route in Hub mode, use the **Options** button in the route entry window to invoke the Options dialog box. Click on the checkbox for **Hub Routing**, and then click on **OK**. All subsequent routes run in the current route entry window will be in hub mode. Use the Options dialog box again to return to "normal" mode.

The Detailed Route Report and State\Country Distance Summary Report are both available for hub routing.



	Zip	City	Miles	Cost	Hours
Hub	08650	Trenton, NJ, Mercer			
Dest 1	07102	Newark, NJ, Essex	52.1	70.84	1:03
Dest 2	08540	Princeton, NJ, Mercer	12.7	17.23	0:18
Dest 3	07052	West Orange, NJ, Essex	64.0	87.08	1:10
Dest 4	07701	Red Bank, NJ, Monmouth	52.3	71.10	0:57
Dest 5	08401	Atlantic City, NJ, Atlantic	74.4	101.20	1:25
Dest 6	08101	Camden, NJ, Camden	34.0	46.29	0:34

Hub Routing

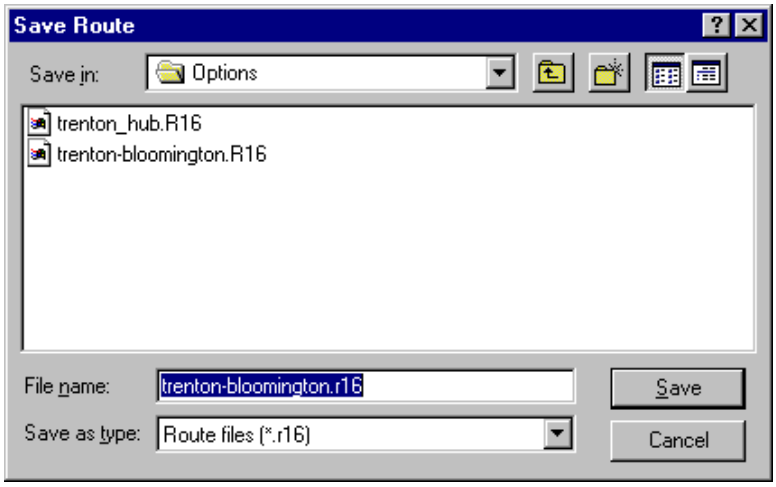
4.11 Custom Routing

PC*MILER enables you to customize routes to avoid or favor road selected road segments, whole roads, and whole states. You can also designate some truck-restricted roads as accessible. Users of the PC*MILER|HazMat add-on module may also choose to override hazardous material routing restrictions.

Instructions for custom routing are found in section 5.5, *Picking Roads to Avoid or Favor*, and section 5.6, *Using the Custom Roads Manager.*

4.12 Saving and Retrieving Trips

With PC*MILER it is possible to save a route to a file for later retrieval, either before or after it is generated. This is particularly useful for trips you run frequently. To save a route either before or after processing, choose **Save Route...** from the File menu or click on the **Save** button on the tool bar to bring up the Save Route dialog box.



Save Route Dialog Box

This is a standard Windows dialog box for saving your workspace. Choose the folder in which you want the file containing your route to be placed, and assign a file name to the file. There is no limit to the number of characters a file name can contain. All route options will be saved together with the route.

To load a previously saved file, choose **Open Route...** from the File menu, or click on the **Open** button on the tool bar. This will bring up a dialog box similar to the one you used to save your route. Select your saved file from the **File Name** pick list and click on **OK**. All the settings used to create the file will be restored. However, you will need to rerun the route to see reports and a RouteMap display of the route.

⇒ **NOTE:** When route files from previous PC*MILER versions (13 or higher) are opened as trips, they are automatically converted to PC*MILER Version 17 format.

4.13 Saving, Appending and Loading Routes in Text Format

To save a set of points to use with PC*MILER|BatchPro™ for batch processing, you must save your route in PC*MILER text format. To do this, choose "PCM-DOS Files (*.in)" from the **List Files of Type** pick list in the Save Route dialog box.

If the file name that you specify is an existing file, PC*MILER will ask if you want to **append** or **overwrite** the route you are saving onto the route in the existing file. **Note that files in PC*MILER text format do not retain mileage, cost and time information,** as they are intended for use with PC*MILER|BatchPro in order to tally total mileages at some regular interval.

To load a DOS route file into PC*MILER, bring up the Open Route dialog box (choose *Open Route...* from the File menu or click on the **Open** button on the tool bar). After locating the drive and folder where the file is saved, choose "PCM-DOS Files (*.in)" in the List Files of Type field. Then double-click on the file you wish to open in the File Name list, or type the complete file name in the File Name field. Click on **OK**. The route will use default options.

4.14 Saving Your Workspace Settings

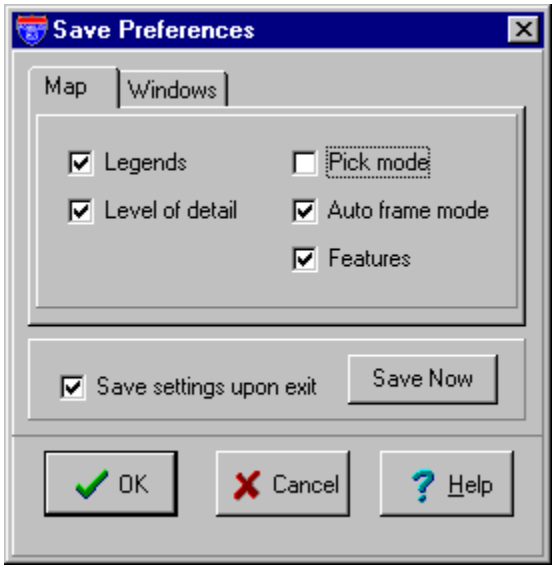
Your current workspace settings can be saved so that the next time PC*MILER is started they will be the same. To save your workspace, select *Save Preferences* from the Tools menu to bring up the Save Preferences dialog box. Workspace settings include the size and position of open windows, and the current map window settings – show\hide legends, pick mode, show\hide features, level of detail, and frame mode.

The Save Preferences dialog box contains two tabs, **Map** and **Windows**.

With the **Map** tab open, use the checkboxes to select which map settings from the Map menu should be saved. Click on a checkbox to place or remove a checkmark. Checked settings will be saved. Checking **Save settings upon exit** tells PC*MILER to save the selected settings every time you exit. To save the current map settings immediately, click on the **Save Now** button.

With the **Windows** tab open, use the checkboxes to select which window settings to save. As in the **Map** tab, check **Save settings upon exit** to

save the selected settings every time you exit, and click on the **Save Now** button to save your current window settings immediately.



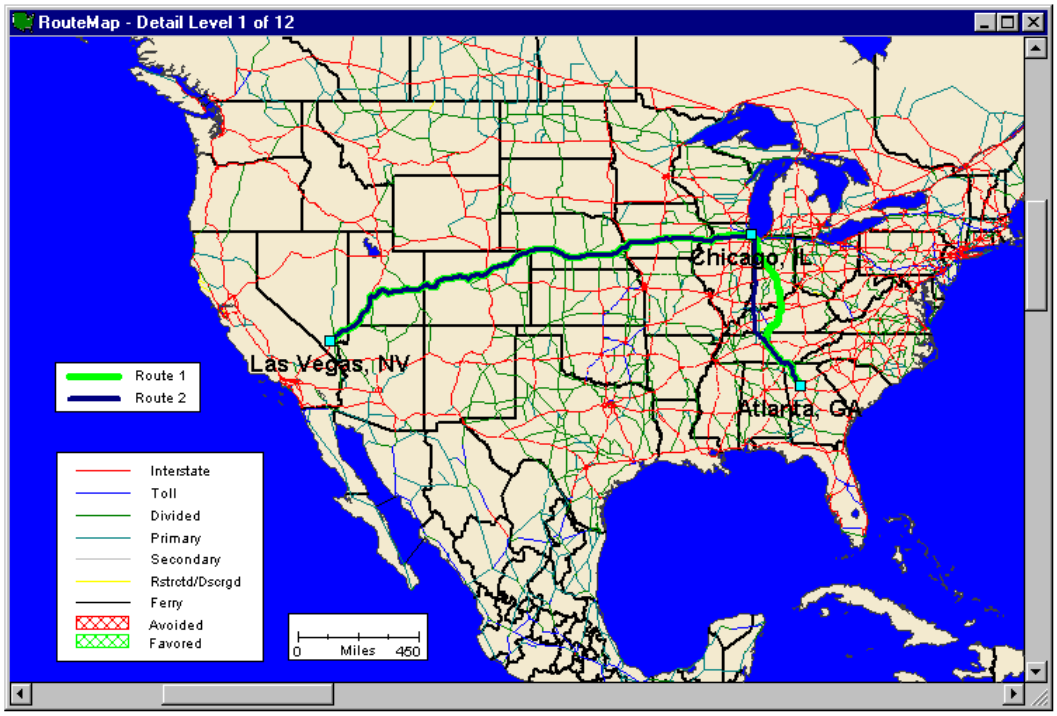
Save Preferences Dialog Box, Map Tab Open

⇒ **NOTE:** Default options and aliases will be saved on exit regardless of whether **Save settings upon exit** is checked.

4.15 Exiting PC*MILER

By default, you exit PC*MILER by choosing **Exit** from the File menu or press **<ALT-F4>**. When you exit, all active windows, default options, aliases and custom roads are saved as they appear on your screen for the next time PC*MILER is opened. (See the previous section for instructions on how to change PC*MILER exit settings.)

5.0 GRAPHIC DISPLAY: USING THE RouteMap™ WINDOW



RouteMap Window

The RouteMap window in PC*MILER is like an "electronic road atlas". All of the routes generated by PC*MILER are automatically displayed on a map in the RouteMap window. This enables you to examine routes in detail, visually evaluate routing alternatives, and perform a variety of "what-if" analyses.

The RouteMap window is very easy to use, just like the rest of PC*MILER. Options in the Map menu enable you to zoom in and zoom out of the RouteMap display, to frame routes in the window, and to control display features such as the level of detail and the number of routes, roads, place names and legends shown on the map.

5.1 First Run a Route

To use RouteMap, first generate a PC*MILER route by entering an origin, a destination, and any intermediate stop-off points in the route entry window and then clicking on the **Run** button.

PC*MILER will automatically generate a graphic display of the route you just ran. Maximize the RouteMap window if it is minimized to see the graphic display of the currently active route. You can do this by double-clicking on the **RouteMap** icon or clicking on the **Map** button on the tool bar.

5.2 Zoom Features

A special feature of the RouteMap window is an automatic zoom option. When the cursor is placed inside the border of the map window, it becomes a cross (unless a pick mode is activated, which will display its own cursor). You can then zoom into an area by either pressing the mouse button and dragging a box around the area, or by double-clicking on a particular location. Double-clicking will zoom in by a factor of 2, and can be repeated for closer views. The level of detail (number of links and place names) will increase appropriately when *Default* is chosen from the sub-menu of the *Detail* command in the Map menu.

Zooming in and out can also be accomplished by clicking on the **Zoom In** or **Zoom Out** buttons on the tool bar, or choosing *Zoom In* or *Zoom Out* from the Map menu. These zoom in or retreat by a factor of 2.

To zoom directly to a stop you have entered in the route entry window, highlight it on the stop list, then do one of the following: 1) double-click the highlighted stop, 2) click the **Zoom to Stop** button on the tool bar, or 3) choose *Zoom to Stop* from the Map menu. The map window will open and the stop will be framed on the map.

To frame all generated routes on the map, click the **All Routes** button on the tool bar. To frame the route in the active route entry window, click the **Frame** button.

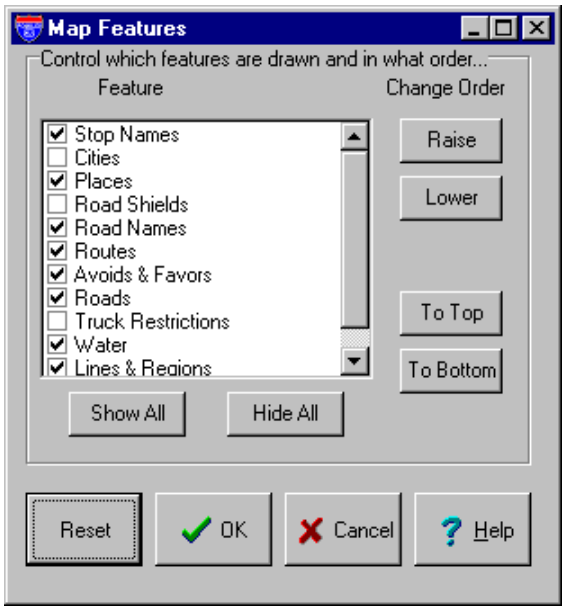
5.3 Right Mouse Menu in the Map Window

A right mouse menu is now available to give you quicker access to map features. To use it, place your cursor in the map window and click the right mouse button. This menu is a duplicate of the Map menu at the top of the PC*MILER program window. All Map menu options are described in this chapter and in section 3.1, *Menus and the Tool Bar*.

5.4 Hiding, Displaying and Layering Map Features

You can control what features are displayed and in what order features are drawn using the Map Features dialog box. Choose *Features...* from the Map menu to bring up the Map Features dialog box.

Using this dialog box, you can hide or display the following map features: cities, points of interest; road shields and road names; generated routes; hazardous material routing restrictions and permits (only with the purchase of the PC*MILER|HazMat add-on module); favored and avoided road designations; highways and roads; truck restrictions that may be overridden; bodies of water such as lakes and inland rivers; and political boundaries.



Map Features Dialog Box

Check the features you want to display on the map. (Clicking a checkbox next to a feature on the list either adds or removes the checkmark.) Use the **Show All** and **Hide All** buttons to select or remove all the checkmarks. Click on the **Reset** button to return to the default setting (all features except truck restrictions are displayed).

The order (from bottom to top) in which the features appear in the dialog box determines the order in which they are drawn: items on the bottom of the list are drawn under the ones at the top. Use the **Raise**, **Lower**, **To Top**, and **To Bottom** buttons to manipulate the list. So, for example, if you highlight "City Names" and then click on the **To Top** button, "City

Names" will move to the top of the list. When the map is redrawn the city names will be drawn last, on top of all other features. Clicking on **OK** closes the Map Features box and redraws the map.

Up to eight routes can be displayed in the RouteMap window at the same time. You can select which routes to show and which to hide in the Map Features dialog box. Each route will be drawn in a different color, as indicated in the Route Legend.

5.4.1 Using the Mouse To Turn Map Labels On\Off

Individual cities and road segment labels can be turned on and off in the map by using the mouse.

To label or hide a city, first click on the **Label Cities** button or choose the *Pick\Label* command in the Map menu and then choose *Label Cities* from the sub-menu. Now click on any unlabeled city on the map to make it appear. Clicking again on the same point will make the label disappear. Locations on the map that can be labeled in this way include all intersections and points on highways. If no city name exists in the PC*MILER database for the location you click, the label will show the name of the route or intersection, for instance "+I-295 US-40".

To label a road segment with a shield or to hide a shield, first click on the **Label Roads** button or choose the *Pick\Label* command in the Map menu and then choose *Label Roads* from the sub-menu. Now you can click on any route segment on the map to make a label appear, or click on a label to make it disappear. Placing your cursor over a label will give you the full name in the status bar at the bottom of the PC*MILER window.

Use the **Clear Labels** button on the tool bar or *Clear Labels* from the sub-menu of the *Pick\Label* command in the Map menu to delete all route shields and city labels you added manually.

⇒ **NOTE:** If you zoom out from an area that you have custom labeled as described above, the labels will disappear as the level of detail decreases. The good news is that when you zoom back in again, your labels will reappear!

5.4.2 Using the Mouse To Pick Stops

PC*MILER gives you the capability to enter stops in the route entry window directly from the RouteMap window **without typing**. You can use the mouse to select any point on a highway, labeled city, unlabeled location, intersection, truck stop, or latitude\longitude point. (See Chapter 3, section 3.2.8 for a description of this feature.) **Hint:** Pass your cursor over the map without pressing the mouse button. Notice that its latitude\longitude position is automatically tracked and appears in the status bar in the lower left corner of the program window.

⇒ **NOTE:** There are some highway junctions which are truck-inaccessible. These junctions won't be recognized if you try to enter them as stops.

5.5 Picking Roads to Avoid or Favor

You may wish to indicate roads that PC*MILER should avoid or favor when generating a route. To select a road to avoid, first click on the **Avoid Roads** button on the tool bar (or from the Map menu, choose **Pick\Label** and then **Avoid Roads** from the sub-menu). Then, on the map, click on the road to be avoided (zoom in for a closer view if necessary). The road segment you chose will be marked with red cross-hatching (you may need to click on several segments). To undo your choice, click on it again. An avoided road is effectively treated as if it were a closed road by PC*MILER unless no other link can be used for the route. To designate a whole road to be avoided, see section 5.6.2.

To favor a road, click on the **Favor Roads** button (or from the Map menu, choose **Pick\Label** and then **Favor Roads** from the sub-menu), then click on the road(s) to be favored. Favored road segments will be marked with green cross-hatching. To designate a whole road to be favored, see section 5.6.2.

⇒ **IMPORTANT NOTE: The roads you designate will only be avoided or favored when the Custom box is checked in the Options dialog box.** Click on the **Options** button in the route entry window, and then click on **Custom** under **Routing**. When this option is turned off, road preferences will remain in the database but will not be activated for a route until the next time you turn this option on. To view, edit, or print a list of all road preferences in the database, use the Custom Roads Manager.

5.5.1 Overriding Truck-Restricted Roads

⇒ **NOTE:** If you have questions about truck restrictions that are not answered in this *User's Guide*, please contact each jurisdiction directly. Roads that are flagged as "truck-discouraged" in the PC*MILER database appear on the map with a thin yellow line and cannot be overridden using the method described below. Instead, they must be designated as favored roads (see above).

PC*MILER normally routes around all truck-restricted roads. However, some of these restrictions may be overridden, making the roads accessible. These roads have a thick yellow highlight drawn over them in the RouteMap window. (PC*MILER assumes that you have been granted permission to use these roads from the controlling authority, or that you are going to be using special equipment.)

To see the road restrictions that may be overridden, turn on the **Truck Restrictions** layer in the Map Features dialog box, which will highlight restricted roads in thick yellow. (See section 5.4, *Hiding, Displaying, and Layering Map Features* for instructions on how to use the Map Features dialog box).

To override a restricted road, first click on the **Toggle Overrides** button on the tool bar, or select *Toggle Overrides* from the sub-menu of the *Pick\Label* command in the Map menu. Then select the road that you want to override by clicking on it in the map window. PC*MILER will redraw the road on the map using a thin green outline. To undo an override, click on the road again, and the thin green line will disappear. Your overrides will be taken into account the next time you run a route.

To route through overridden restrictions, change your route type to **Custom** (click on the **Options** button in the route entry window, and then click on **Custom** under **Routing**).

When running routes, the roads you chose will only be overridden when Custom routing is checked in the Options dialog box. When this option is turned off, your overrides will remain in the database but will not be activated for a route until the next time you turn this option on.

⇒ **NOTE:** When you click on a restricted road, you only override that one segment of the road. Be sure to override all of the segments that you plan to drive through, or PC*MILER will consider the entire road inaccessible.

As you override each restricted road segment, a record of it is automatically saved in the **Overrides** tab of the Custom Roads Manager (see section 5.6, *Using the Custom Roads Manager*).

⇒ **NOTE:** If you have overridden a truck-restricted road but PC*MILER still will not route over that road, the most likely reason for this is that the road segment is truck-discouraged as well as truck-restricted. (See section 6.3, *Frequently Asked Questions*, for an explanation of truck-discouraged roads.) In addition to overriding the road, you must mark it as favored to make it fully truck accessible. Select the **Favor Roads** button on the tool bar is selected, and then click on all of the road segments in the restricted road. The next time you run a route, PC*MILER will consider this road to be accessible.

5.5.2 Hazardous Material Routing on Maps

When you generate a route **using the PC*MILER|HazMat add-on data module**, the map that is generated will automatically show which route segments are prohibited or designated. Prohibited segments will be indicated by red hatch marks, designated segments by green hatch marks.

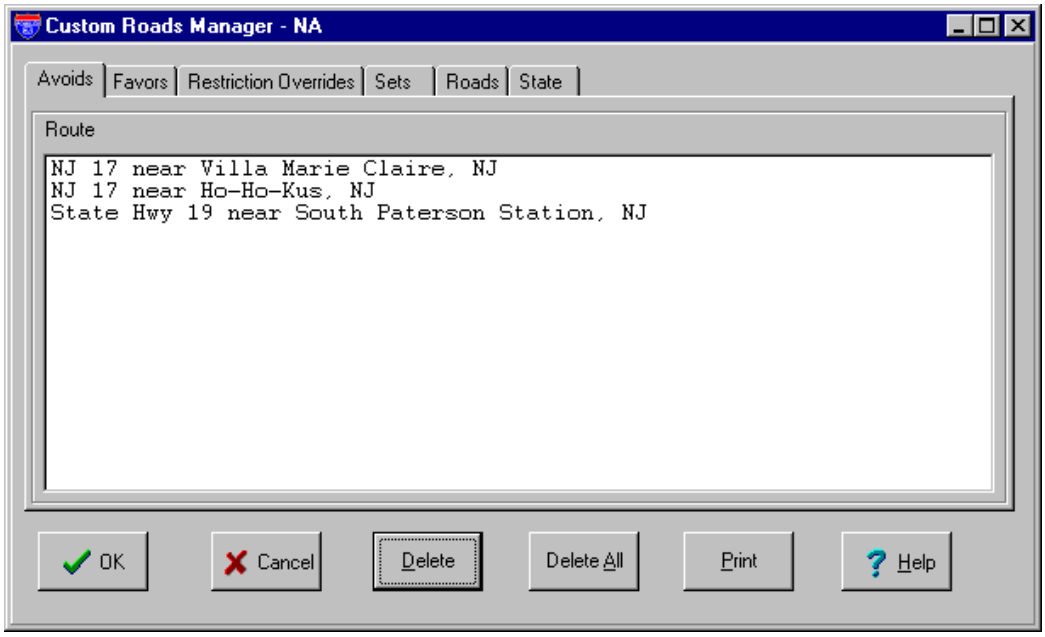
These hatch marks can be hidden from view by turning off the **Hazardous Material** feature in the Map Features dialog box (see section 5.4, *Hiding, Displaying and Layering Map Features*).

PC*MILER|HazMat customers who have obtained permits can change the status of hazmat prohibited roads. To do this, click on the **Adjust for Permits** button (or from the Map menu, choose *Pick\Label* and then *Adjust for Permits* from the sub-menu), then click on the prohibited road(s) that you wish to make accessible for routing. The red crosshatch pattern covering the selected roads will now have a bright green outline. The custom road settings you create can be removed by clicking again on the same road, or by using the Custom Roads Manager described below.

5.6 Using the Custom Roads Manager

The Custom Roads Manager enables you to see which roads are marked in the database as avoided, favored, overridden as accessible, or permitted for hazardous materials (HazMat permits available only with add-on data module). It also allows you to create custom sets of roads and to designate whole roads or whole states to avoid or favor. To open this dialog, choose *Manage Custom Roads…* from the Tools menu or press **<Alt><F2>**.

Whenever a road segment is altered in the map display, this change is automatically reflected in the appropriate tab of the Custom Roads Manager.



Custom Roads Manager

The **Avoids** tab will be open when you open the dialog box. This tab lists all roads designated to be avoided. Click on the **Favors** tab to see the list of all roads designated to be favored.

Click on the **Restriction Overrides** tab to see the list of all truck-restricted roads that have been manually overridden in PC*MILER to make them accessible for routing.

To remove a road from any of these tabs, highlight it on the list and click on **Delete**. To clear the entire list, click on **Delete All**. These changes are automatically made to the map as well.

5.6.1 Custom Sets

The **Sets** tab enables you to manage multiple sets of roads to be avoided, favored, and overridden, and allows you to create custom sets. You may find that custom sets are a useful tool for working with special equipment you operate, or for seasonal routing requirements.

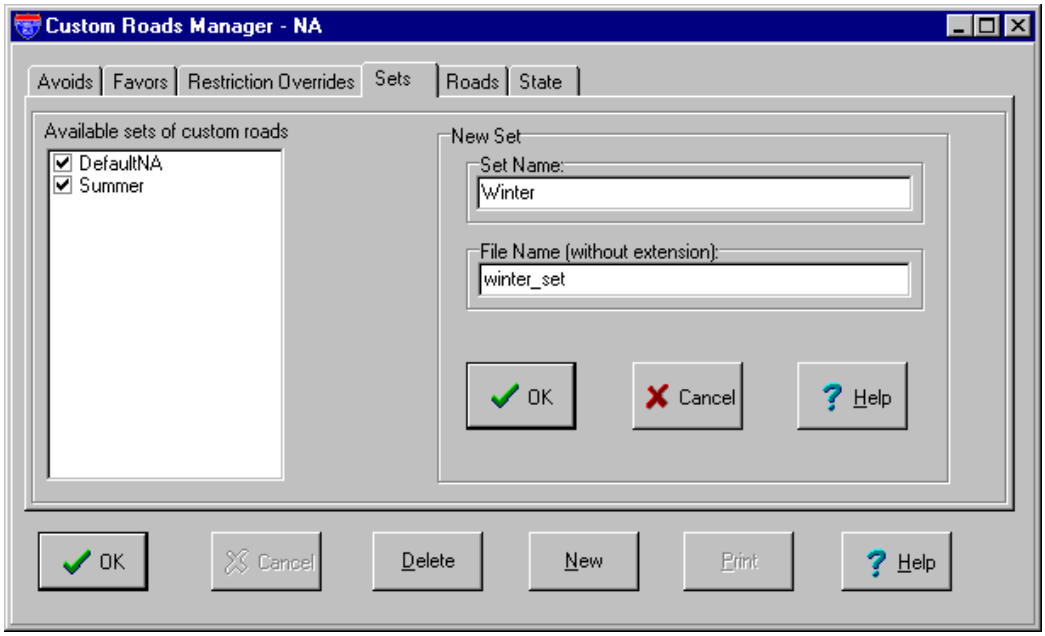
To create a new set, click **New**. Enter a name for your set in the **Set Name** field of the dialog box that appears, and a file name in the **File Name** field. (The file name is saved to the Options folder in your

PC*MILER data folder.) Once you click **OK**, the name of your new set appears in the list of available sets.

Note the following guidelines for creating new set and file names:

- Set names cannot be longer than 50 characters, and must be comprised of letters and\or numbers.
- Spaces are not allowed in either the set or file names, but underscores ("_") are permitted.
- You cannot include the file extension as part of the file name.
- You cannot use a set or file name that already exists.

To add preferences to a set, check it in the **Available sets** list to make it active and uncheck all the other sets. Then pick roads to avoid or favor from the map.



Sets Tab, Custom Roads Manager

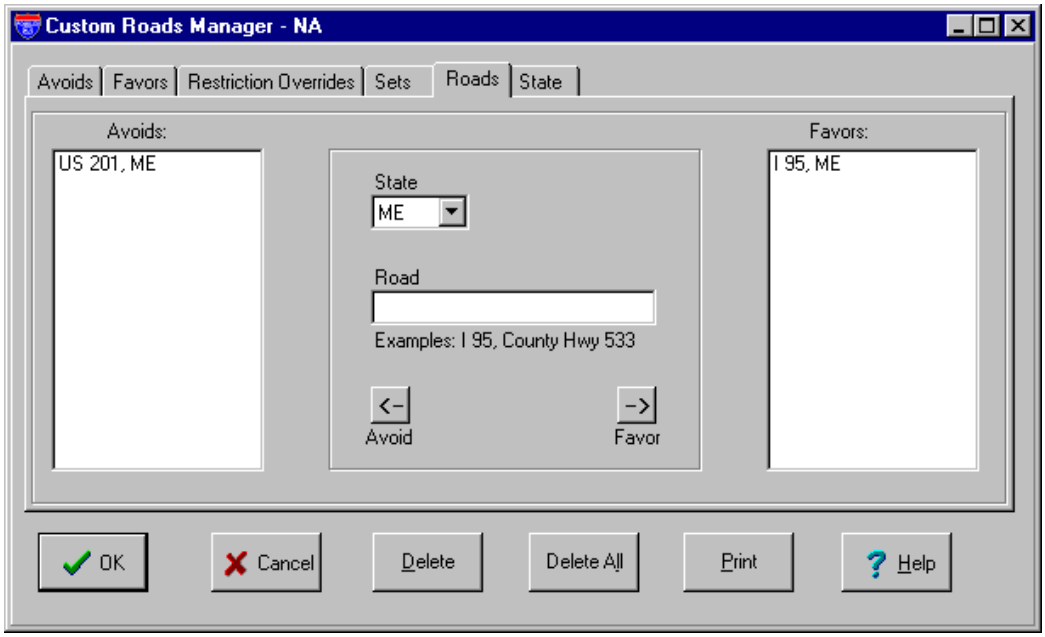
When you activate a set, the road preferences within that set will be marked as avoided or favored on the map and will be used when generating routes. These preferences will also be listed in the **Avoid**, **Favor**, and **Restriction Overrides** tabs. Conversely, if a set is inactive, its avoid\favor\override preferences are not visible on the map or in the corresponding tabs and are not used when generating routes.

When more than one set is checked, then all preferences in the active sets are visible on the map and listed in the corresponding tabs. However, you cannot add or delete roads to be avoided, favored, or overridden at this time. Road designations must be added or deleted when only one set is active. When multiple sets are active, the Favor Roads, Avoid Roads, and Toggle Overrides options are grayed out on the tool bar and in the Map menu.

To remove a set, highlight it on the list and click on **Delete**. These changes will be automatically reflected on the map as well.

5.6.2 Avoiding or Favoring Whole Roads

To designate a whole road to avoid or favor, click on the **Roads** tab. Select a state from the drop-down pick list, then type the road name in the **Road** field (e.g. **US 1**) without a state abbreviation. Click one of the arrows under the **Road** field to add this road to either the **Avoids** or **Favors** list. To shift a road from one list to the other, you must first delete it (highlight it and click the **Delete** button) and then add it to the other list.



Roads Tab, Custom Roads Manager

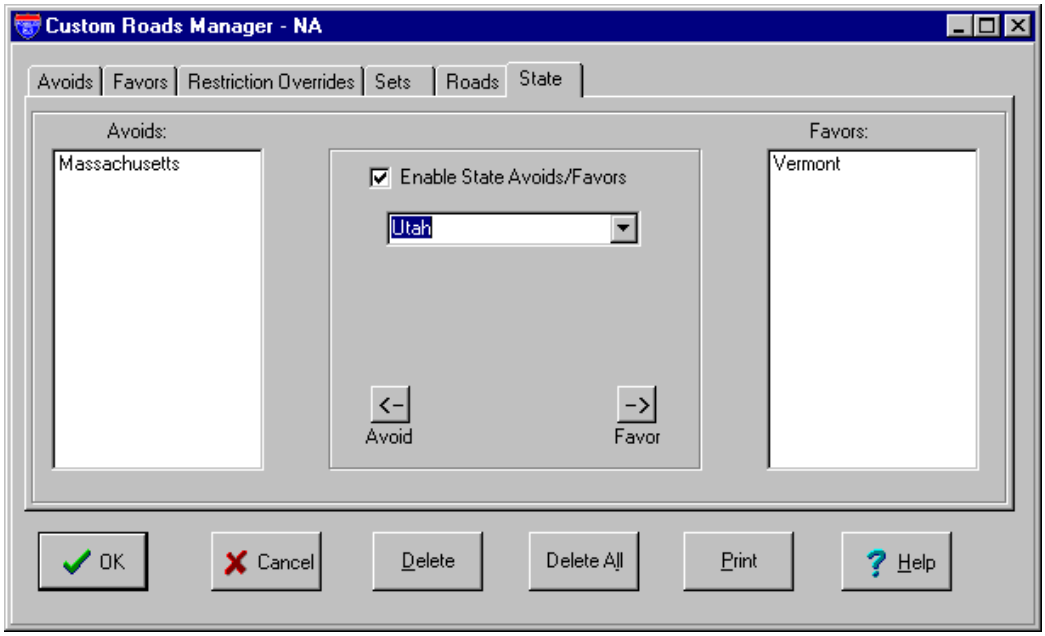
To see how the name of a particular road appears in the PC*MILER database, you can zoom to that road on the map and place your cursor over the road without clicking. Some highway labels may include a common name along with the road number; for example, "**Pennsylvania**

Turnpike (I 276)". In these cases, use the road number in parentheses, e.g. "**I 276**" in this example.

You can also look up a road name in Appendix F at the end of this *User's Guide* or in the *Road Abbreviations* reference topic in on-line Help (select *Contents and Index* from the Help menu, click the plus sign next to *Reference* in the **Contents** tab, click *Road Abbreviations*).

5.6.3 Avoiding or Favoring Whole States

To avoid or favor a whole state, click the **State** tab. Next, you must check **Enable State Avoids\Favors** at the top of the tab to activate this feature. Then pick a state from the pick list and click one of the arrows to assign it to the **Avoids** or **Favors** list. To transfer a state from one list to the other, first delete it (highlight it and click the **Delete** button) and then add it to the other list.



State Tab, Custom Roads Manager

5.6.4 Converting Custom Road Files from Older Versions of PC*MILER

Saved custom road preferences from PC*MILER versions 12.0 or higher can be imported using PC*MILER's new file conversion utility. From the Tools menu, select *Convert Custom Roads…* . Click **Import** and navigate to your existing Avoid.dat or Permit.dat file. This file is usually located in the Na > Options folder in your PC*MILER installation folder. After you find the file, click **Open** and your saved road preferences will be imported.

Once the import process is complete, clicking on any listed road segment in the Conversion Utility dialog will zoom to that segment on the map where you can edit your preferences further if necessary.

5.6.5 Hazardous Routing Permits

Users of the PC*MILER|HazMat add-on data module will also see a **Haz Permits** tab in the Custom Roads Manager. This tab lists all roads that have been manually designated as permitted for PC*MILER routes using the **Adjust for Permits** function (see section 5.5.2). This tab works independently of the other tabs in the Custom Roads Manager, so permitted roads cannot be included in sets.

To remove a road from the list of permitted hazmat roads, highlight it on the list and click on **Delete**. To clear the entire list, click on **Delete All**. Note that as you delete each road, it will return to prohibited status, as indicated in the RouteMap window.

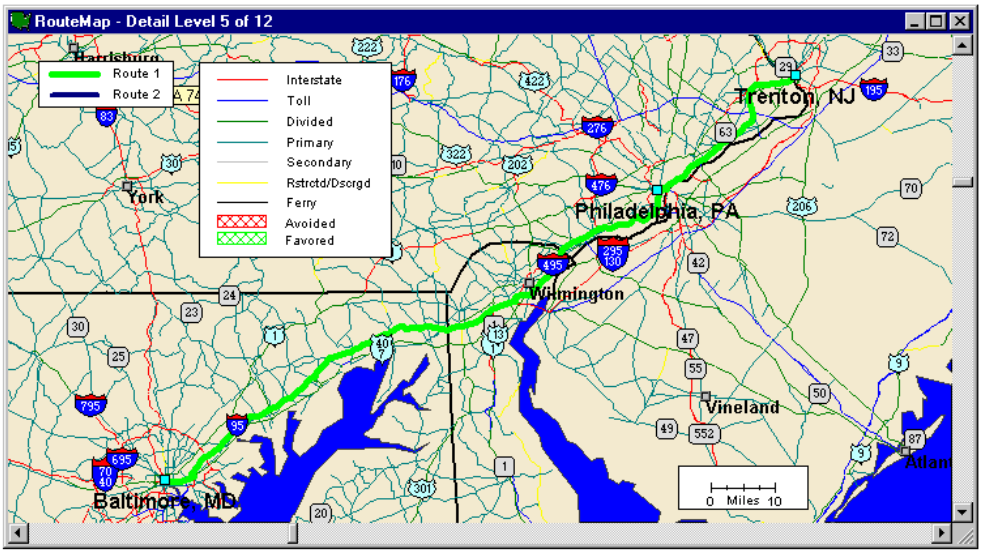
5.7 Legends

There are three legends available in the RouteMap window: Road, Route and Scale of Miles (Restriction is a fourth legend, available to PC*MILER|HazMat users). All legends can be moved around within the map window by dragging. They can be hidden or shown using the *Legend* command in the Map menu. Choose one or more options from the sub-menu. When all legends are "on" (have a checkmark next to them) in the Map menu, the **Road Legend** appears when roads are displayed; the **Route Legend** appears after a route window is opened; and the **Scale of Miles** legend always appears as part of the map. Road types that are included in each classification in the Road Legend are shown below:

Interstate	Multi-lane toll free and urban highways
Toll	Toll roads and urban highways
Divided	Divided highways, urban access roads
Primary	Non-divided highways
Secondary	Non-divided highways, urban access roads, ferries
Rstrctd\Dscrgd	Truck-restricted\truck-discouraged roads
Ferries	Ferries

5.8 Framing Geographic Areas or Routes

The *Frame* option in the Map menu selects an area of the map to frame in the RouteMap window. Make a selection in the sub-menu to frame one of the following areas: **US**, **Puerto Rico**, **North America (NA)**, **Mexico**, **Hawaii**, **Greenland**, **Canada**, **or Bermuda**. **Auto Frame Route** automatically frames each new route as it is generated.



Framed Route in the RouteMap Window

All Routes frames all generated routes already drawn on the map. To frame just one route, select it from the bottom of the menu. (Another way to frame a single route is to click the **Frame** button in the route entry window that was used to generate it.)

5.9 Other Map Menu Options

Redraw initiates a redraw of the current display.

The *Detail* command controls the number of links and place names that are drawn on the map, and contains sub-menu options:

- To add detail to the map, select **More** from the sub-menu or click the **More** button on the tool bar. To remove detail from the map,

select **Less** from the sub-menu or click the **Less** button on the tool bar. Continue to add or remove more detail as needed by either using the Map menu or clicking on the depressed tool bar buttons. (Both of these buttons will stay depressed to indicate that you are displaying more or less than the default details.) When the map has reached its maximum or minimum level of detail, the corresponding button and menu option will be grayed out.

⇒ **NOTE:** To label specific cities and\or roads without changing the level of detail shown on the whole map, use the *Pick\Label* command in the Map menu or the **Label Cities** and **Label Roads** buttons on the tool bar (see section 5.4.1).

- *Default* will return to the default number of links and place names. The *Default* setting automatically increases the amount of detail when you zoom in on a particular area.

- *Use Shape Points* tells PC*MILER to show road curves in more detail.

The *Stop Labels* command determines how the names of your stops will appear in the map, and contains three options in its sub-menu:

Selecting *Name Only* labels stops with their names alone.

Number Only labels stops with their orders in the trip. The route's origin is labeled "**O**". The final stop is labeled "**D**" (for destination). The intermediate stops are labeled in the format "**S#**", so that, for example, Stop 1 would be labeled as **S1**.

Name & Number labels stops with both their names and orders in the trip. The route's origin is labeled "**O:**", followed by the stop name. The final stop is labeled "**D:**" (for destination), followed by the stop name. The intermediate stops are labeled by their stop number, followed by the stop name, so that, for example, Stop 1 may be labeled as **1: Princeton, NJ**.

5.9.1 Printing a Map

To print a map that is currently displayed in the RouteMap window, choose *Print Map...* from the File menu or click on the **Print** button on the tool bar **while the RouteMap window is active**.

5.9.2 Copying a Map to the Clipboard

Maps can be copied to the clipboard for retrieval in other Windows programs. To do this, choose *Copy Map* from the Edit menu **while the**

RouteMap window is open and active. When the RouteMap window is not active, the *Copy* command in the Edit menu will say *Copy Report*.

5.10 Saving Map Settings

Map settings can be saved for future use or you can choose to have them automatically saved when you exit PC*MILER. To do this, choose *Save Preferences* from the Tools menu to bring up the Save Preferences dialog box. See section 4.14 for more information.

6.0 TECHNICAL SUPPORT

ALK Technologies offers one year of free unlimited technical support to all registered users of PC*MILER. If you're having a problem with the program, please check section 6.3 (*Frequently Asked Questions*) before contacting us.

To print additional copies of this manual, use the Adobe .pdf version that was placed on your PC by the PC*MILER installation program. Click the Windows **Start** button, then go to **Programs > PCMILER 17 > PCMILER 17** and select the .pdf file from the sub-menu. If you do not have Adobe Acrobat Reader installed, see section 2.4.

If you have any questions about PC*MILER or problems with the software that cannot be resolved using this manual, contact our staff at the phone number or e-mail address below.

PC*MILER Technical Support Staff
Hours: M-F, 8:30 am-5:30 pm EST
Phone: (609) 683-0220, ext. 301 or 303
E-mail: pcmsupport@alk.com
Web site: www.pcmiler.com

When calling, ask for PC*MILER Technical Support. **Please be sure to have your PC*MILER key code, version number, Windows version number, and hardware configuration information (manufacturer, speed, and monitor type) available before your call.** Please include this information in your message if you are contacting us by e-mail.

6.1 Database Support

ALK Technologies' North American Highway Network, the primary database used by PC*MILER products, undergoes constant revision. Revisions include: addition of new roads, upgrades of improved sections of highway, and addition of new Key Cities.

ALK Technologies is dedicated to maintaining a highway network of the highest quality and welcomes user input and comments. If you encounter any problems related to mileages, routing or highway names, please print a copy of the route listing highlighting the problem (such as incorrect road name, mileage, city name, ZIP code) and send it to:

PC*MILER Products Division
ALK TECHNOLOGIES, INC.
1000 Herrontown Road
Princeton, NJ 08540
FAX: (609) 252-8108
E-mail: pcmsupport@alk.com

6.2 PC*MILER Updates

PC*MILER updates are offered on an annual basis. Updates may include revisions to the PC*MILER software, updates to the North American Highway Network database, and updates to the US ZIP code database. To order your update contact ALK Technologies, Inc. or your PC*MILER dealer.

The PC*MILER Bulletin Board is available on the Internet for you to download any new executables and program files available for your version of the software developed since its initial release. To access the bulletin board, enter the PC*MILER website at **www.pcmiler.com**, and click on the shield labeled **Support** at the bottom of the screen. The Technical Support page will post several options, one of which will be to access the bulletin board.

6.3 Frequently Asked Questions

Question: *When I enter a city and state, I receive the message* < ***No matching records found >****.*

Answer: Double-check that your city and state information is accurate, and your spelling is correct. You can use the Spelling Helper to check spelling – type the first two or three letters of the city name, followed by a comma and state abbreviation, and press the **<Enter>** key. Then choose a city from the pick list.

Question: *What is the difference between a truck-restricted road and a truck-discouraged road in PC*MILER?*

Answer: A truck-restricted road, as determined by the controlling governmental authority, prohibits most kinds of truck use. Such a road is highlighted with a thick yellow line in the PC*MILER map window. In accordance with these regulations, PC*MILER does not use truck-restricted roads when routing. However, you can override some of these restrictions using the **Toggle Overrides** feature, described in section 5.5.1.

A truck-discouraged road is one that is not very compatible with truck use, as determined by PC*MILER. The road may be discouraged because it is winding, or not well paved, or for a variety of other reasons. This type of road is usually drawn as a thin yellow line in the RouteMap window. PC*MILER avoids routing over truck-discouraged roads whenever possible, with the following exceptions:

- If the destination is located on such a road
- If avoiding the truck-discouraged road will add significant time and distance to a route
- If you have marked the road to be favored.

Question: *I have overridden a truck-restricted road, but PC*MILER still will not route over that road. Why is this happening?*

Answer: Most likely, the road segment is truck-discouraged as well as truck-restricted. In addition to overriding the road, you must mark it as favored to make it fully truck accessible. Make sure the **Favor Roads** button on the tool bar is selected, and then click on all of the road segments in the restricted road. The next time you run a route, PC*MILER will consider this road to be accessible.

Question: *Can I change the font or icons on a PC*MILER map?*

Answer: No, you cannot, they are hard-coded into our software.

Question: *When running a route, I get the error "No Route Found". What can I do?*

Answer: The route won't run because there is a truck restricted road around the location. Follow the instructions below:

1. Start PC*MILER.
2. Go to File menu and select *New Route.*
3. In the route entry window, type your city name in the **Stop** field and hit the **<Enter>** key.
4. Now enter another stop and hit the **<Enter>** key.
5. Next, click the **Run** button, and it should return an error.
6. Double-click on your city on the stop list. This should frame it on the map.
7. Go to the Map menu and select *Features…*

8. Click on the **Show All** button and then click on **OK**.
9. Now there should be a road drawn with a thick yellow line right next to your city on the map.
10. Go to the Map menu again, select *Pick Label* > *Toggle Override*.
11. Now when you bring the cursor over the map window, it will be an arrow with a check mark next to it and the word “Over” under it.
12. Click the point of the arrow on the road wherever you see it highlighted in heavy yellow. This will highlight the yellow road with a thin green line around it.
13. Once all of the restricted road is highlighted with green, go to the Route menu and select *Default Options*.
14. Put a check mark next to **Custom** and then click **OK**.
15. Go to the Windows menu and select “Route 2, Na, Practical, Open”.
16. Select the **Options** button and then put a check mark next to **Custom** and click **OK**.
17. Click on the **Run** button and it should run the route.
18. The options you need are now set and ready to run.

7.0 ALK TECHNOLOGIES OVERVIEW

ALK Technologies, Inc. is an industry leader in decision support systems for the transportation and logistics industries, and develops computer mapping and navigation software for commercial and consumer applications. Founded in 1979 and based in Princeton, New Jersey, the firm is one of North America's largest technology development companies serving the transportation industry.

APPENDICES

on the following pages

A: Access Policies for the National Network

B: Canadian Codes for Duplicate City Names

C: Map Icons Legend

D: Mexican State Abbreviations

E: N. American State\Country Abbreviations

F: Road Abbreviations Used in Maps

Appendix A: Access Policies from National Network Routes to Terminals and Services

AL 1 Mile from National Network

AK 5 Miles from National Network
Does not apply to (1)Johnson Rd, near Delta Jct., intersecting AK2 (2)Kalifornsky Beach Rd. (3)Kenai Spur Rd. (4)Bridge access Rd. and other postings.

AZ Extensive permissions on state designated 102" wide network.

AR Open Access, several exceptions are incorporated into PCM database. However, be aware that many National Network AR highways have weight limits significantly less than 80,000 pounds.

CA 1 Mile for Services when signed, and the entire Network of Terminal Access routes - these are posted and a map is available from CA DOT.

CO Open Access, several exceptions incorporated into PCM database.

CT 1 mile; however, 48 ft tractor semi-trailer is legal throughout CT

DE 1 mile; anything greater requires a permit.

DC Access by Permit Only

FL Open Access, several exceptions incorporated into PCM database.

GA 1 mile and GA designated access system, map available from GA DOT

ID Open Access, however, there are several 65 ft length limitations.

IL 5 miles, additional IL designated system map available from IL DOT.

IN Open Access

IA 5 miles off the Interstate system
1 mile from all other designated roads

Roads and Streets within cities connected to the National Network are also considered access routes; as well as cities with the following distances:

Distance	Population
3 miles	less than 2,500
4 miles	2,500-25,000
6 miles	25,000-100,000
8 miles	100,000-200,000
10 miles	greater than 200,000

KS Open Access

KY 5 Miles

LA 10 Miles

ME 1 Mile in Federal Aid Urban Areas\ 2 Miles in rural areas. Official lists of approved access routes, available from ME DOT (207) 289-3775

MD 1 Mile for services; shortest practical route for terminal access, with the exception of US2 between US50 & I695 between 6am and 9pm.

MA 1 Mile

MI 5 Miles on state highways. Additional travel permitted throughout the Michigan Designated Network. (map of MI designated network available from MI DOT)

MN On approved access routes only. Additional travel for many STAA dimensioned vehicles on the Twin Trailers Network. Contact MN DOT for listing of approved access routes and map of TTN.

MS Open Access; however, many highways have weight limits of significantly less than 80,000 pounds.

MO 10 Miles

MT Open Access

NE Unlimited access on US, State & Local roads, except US159 from Rulo to MO; US34 from 6th and Main in Plattsmouth to IA; and N370 from Bellevue to IA.

NV Open Access, except US93 from SR500 north of Boulder City to AZ; SR208 from Mason, NV to CA; and SR226 from Jack Creek to Mountain City NV.

NH 1 Mile

NJ 1 Mile and throughout the New Jersey defined route system, 102" standard trucks may travel 2 miles off of the route system.

NM 5 Miles for food, fuel, rest and repair;
20 miles to terminals for delivery, loading, or unloading;
and predesignated access routes.

NY 1 mile, except the New York City area which is limited to 750 feet. There is an extensive list of designated access routes available from the NY DOT, Truck Access Program. (518) 457-7436

NC 3 Miles

ND 10 Miles

OH Open Access

OK 5 Miles

OR 1 Mile

PA 1 Mile and extensive list of predesignated access routes (list available from PA DOT)

RI 1 Mile for twin trailers, truck-tractor trailers are permitted open access.

SC 5 Miles and the state designated system of reasonable access routes.

SD Open Access

TN Open Access

TX Open Access

UT Open Access

VT 1 Mile

VA 1 Mile and state designated access system. 1 Mile access does not apply in Arlington & Henrico counties, incorporated towns and cities. Access is also available on predesignated access routes (map available from VA DOT).

WA Open Access, except vehicles over 5,000 # may not travel in Mt. Rainier National Park, nor on WA 410 from the Park to the American River, nor on WA 123 from the Park to WA 12. The Yakima Canyon Route (WA 821) is closed to commercial truck combinations from May 15 to Sept 15.

WV 2 Miles and the State Designated Truck Access Routes.

WI 5 Mile access; additional travel on state designated system.

WY Open Access

Notes:

Moving to or from the National Network, the shortest practicable route should be used.

All miles listed are road miles.

All access policies apply to Interstate, US and State highways. Check with local authorities for other roadway policies.

All the Access policies listed above hold true unless otherwise posted.

Engineering surveys and other situations may find specific road segments unsuitable for STAA dimensioned vehicles. The PC*MILER database incorporates some of these exceptions, however, there are certainly other exceptions posted on the National Network.

You may petition states for permission to travel beyond National Network and existing access routes. You may also petition to permanently add a specific access route in many states.

Appendix B: Canadian Codes for Duplicate City Names

Province	Counties & Touristic Region
Alberta	*(Contains no Touristic Regions or Counties)*
British Columbia	*(Contains Tourism Regions)* VANCOVER ISLAND VANCOVER COAST AND MOUNTAINS OKANAGAN\ SIMILKAMEEN KOOTENAY COUNTRY HIGH COUNTRY CARIBOO NORTH BY NORTHWEST PEACE RIVER\ ALASKA BC ROCKIES
Manitoba	*(Contains no Touristic Regions or Counties)*
New Brunswick	*(Contains Counties)* ALBERT CARLETON CHARLOTTE GLOUCESTER KENT KINGS MADAWASKA NORTHUMBERLAND QUEENS RESTIGOUCHE ST. JOHN SUNBURY VICTORIA WESTMORLAND YORK

Newfoundland *(Contains no Touristic Regions or Counties)*

Northwest Territories *(Contains no Touristic Regions or Counties)*

Nova Scotia *(Contains Counties)*

ANNAPOLIS
ANTIGONISH
CAPE BRETON
COLCHESTER
CUMBERLAND
DIGBY
GUYSBOROUGH
HALIFAX
HANTS
INVERNESS
KINGS
LUNENBURG
PICTOU
QUEENS
RICHMOND
SHELBURNE
VICTORIA
YARMOUTH

Ontario *(Contains Counties)*

ALGOMA
BRANT
BRUCE
COCHRANE
DUFFERIN
DURHAM
ELGIN
ESSEX
FRONTENAC
GREY
HALDIMAND - NORFOLK
HALIBURTON
HALTON
HAMILTON - WENTWORTH
HASTINGS
HURON
KENORA

KENT
LAMBTON
LANARK
LEEDS - GRENVILLE
LENNOX - ADDINGTON
MANITOULIN
MIDDLESEX
MUSKOKA
NIAGARA
NIPISSING
NORTHUMBERLAND
OTTAWA - CARLETON
OXFORD
PARRY SOUND
PEEL
PERTH
PETERBOROUGH
PRESCOTT AND RUSSELL
PRINCE EDWARD
RAINY RIVER
RENFREW
SIMCOE
STORMONT, DUNDAS, AND GLENGARRY
SUDBURY
SUDBURY RM
THUNDER BAY
TIMISKAMING
TORONTO
VICTORIA
WATERLOO
WELLINGTON
YORK

Prince Edward Island *(Contains counties)*

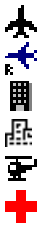
KINGS
PRINCE
QUEENS

Quebec	*(Contains Touristic Regions)* ABITIBI-TEMISCAMINGUE BAIE-JAMES BAS-SAINT-LAURENT CHARLEVOIX CHAUDIERE - APPALACHES COEUR-DU-QUEBEC DUPLESSIS ESTRIE GASPESIE ILES-DE-LA-MADELEINE LANAUDIERE LAURENTIDES LAVAL MANICOUAGAN MONTEREGIE MONTREAL OUTAOUAIS QUEBEC SAGUENAY - LAC-SAINT-JEAN
Saskatchewan	*(Contains no Touristic Regions or Counties)*
Yukon	*(Contains no Touristic Regions or Counties)*

Appendix C: Map Icons Legend

(See PC*MILER On-line Help for an exact representation of icon colors.)

Buildings



airport (major)
airport (regional)
building
convention center
heliport
hospital
industrial park
library
office
religious *(color=blue)*
school

Cities and Towns

major city
large city
regional city
large town
town
small town
hamlet
town (all others)
locale *(color=white)*

Coastal

bay
beach
cape
cove
harbor
island
isthmus
sea

Government

city hall
civil
government building
military
post office

Landforms

basin
cliff
flat
gap
gut
range
summit
valley

Miscellaneous

bridge

cemetery

highway exit

mine

oilfield

tunnel

Recreation

amusement center

campground

casino

forest

golf course

museum

park

reserve

sports

ski area

trail

theater

woods

Shops and Services

auto

bank

car rental

courier

distributor

hotel

printing

restaurant

shopping

gas station

Water Features

bend

canal

channel

crossing

dam

falls

lake

levee

rapids

Appendix D: Mexican State Abbreviations

Abbreviation	Estado
AG	Aguascalientes
BJ	Baja California
BS	Baja California Sur
CP	Campeche
CH	Chiapas
CI	Chihuahua
CU	Coahuila de Zaragoza
CL	Colima
DF	Distrito Federal
DG	Durango
GJ	Guanajuato
GR	Guerrero
HG	Hidalgo
JA	Jalisco
EM	Mexico (Estado)
MH	Michoacan de Ocampo
MR	Morelos
NA	Nayarit
NL	Nuevo Leon
OA	Oaxaca
PU	Puebla
QA	Queretaro Arteaga
QR	Quintana Roo
SL	San Luis Potosi
SI	Sinaloa
SO	Sonora
TA	Tabasco
TM	Tamaulipas
TL	Tlaxcala
VZ	Veracruz
YC	Yucatan
ZT	Zacatecas

Appendix E: North American State\Country Abbreviations

AL	Alabama
AK	Alaska
AB	Alberta
AZ	Arizona
AR	Arkansas
BC	British Columbia
BD	Bermuda
CA	California
CO	Colorado
CT	Connecticut
DE	Delaware
DC	Dist. of Columbia
FL	Florida
GA	Georgia
GL	Greenland
HI	Hawaii
ID	Idaho
IL	Illinois
IN	Indiana
IA	Iowa
KS	Kansas
KY	Kentucky
LA	Louisiana
ME	Maine
MB	Manitoba
MD	Maryland
MA	Massachusetts
MI	Michigan
MN	Minnesota
MS	Mississippi
MO	Missouri
MT	Montana
MX	Mexico
NE	Nebraska
NV	Nevada
NB	New Brunswick
NH	New Hampshire
NJ	New Jersey
NM	New Mexico
NY	New York
NL	Newfoundland and Labrador

NC	North Carolina
ND	North Dakota
NT	Northwest Territory
NS	Nova Scotia
OH	Ohio
OK	Oklahoma
ON	Ontario
OR	Oregon
PA	Pennsylvania
PE	Prince Edward Island
QC	Quebec
PR	Puerto Rico
RI	Rhode Island
SK	Saskatchewan
SC	South Carolina
SD	South Dakota
TN	Tennessee
TX	Texas
UT	Utah
VT	Vermont
VA	Virginia
WA	Washington
WV	West Virginia
WI	Wisconsin
WY	Wyoming
YT	Yukon Territory

Appendix F: PC*MILER Road Abbreviations Used on Maps

10-BUS	US-10 BUSINESS ROUTE
100 AV	100 AVENUE
100 ST	100 STREET
100B	RTE 100B
101A	ALT 101
101D	ALT 101
103 ST	103 STREET
1058	FARM 1058
107 AV	107TH AVENUE
109 AV	109TH AVENUE
10LOOP	I-10 LOOP
10THAV	10TH AVENUE
11/17B	ON RTE 11/17B
111 AV	111TH AVENUE
111A	RTE 111A
113ST	113 NTH STREET
114 ST	114 NTH STREET
114A	ALT 114
117BUS	US-117 BUSINESS ROUTE
118 AV	118TH AVENUE
11A	ALT 11
11A	ALBERTA 11A
11AVE	11TH AVENUE
11B	ON RTE 11B
11STBR	11TH ST BRIDGE
11THST	11TH STREET
120LP	120 LOOP
122A	MASSACHUSETTS RTE 122A
123A	ALT 123
127BUS	US-127 BUSINESS ROUTE
12A	ALT 12
12A	RTE 12A
12THST	12 TH ST
12THST	12TH ST COLUMBIA
12THST	12TH STREET
131BUS	US-131 BUSINESS ROUTE
137 AV	137TH AVENUE
13A	US RTE 13A
14 X	HIGHWAY 14 X
14MIRD	14 MILE ROAD
14STSW	14TH STREET S.W.

14THST	14TH STREET
158BUS	US-158 BUSINESS ROUTE
15SPUR	MO-15 SPUR
15THST	15TH STREET
16 A	HIGHWAY 16 A
16THAV	16TH AVENUE
16THST	16TH STREET
170ST	170TH STREET
178-TH	178-TH STREET
17MILE	17 MILE ROAD
17MIRD	17 MILE ROAD
17THST	17TH STREET
17THST	17TH STREET
17THST	SEVENTEENTH STREET
183BYP	US-183 BYPASS
18THAV	18TH AVENUE
18THST	18TH STREET
196TST	196TH STREET SW
19SPUR	ROUTE 19 SPUR
19THST	19TH STREET
1A	ALT 1
1A	AB RTE 1A
1A	BC RTE 1A VANCOUVER
1A	TRANS CANADA 1A
1ST ST	1ST STREET
1ST ST	FIRST STREET
1STYEL	IST YELLOWSTONE HIGHWAY
2-RAMP	US-2 ACCESS RAMP
20 BYP	US 20 BYPASS
202A	ALT RTE 202
220BUS	US-220 BUSINESS ROUTE
221BYP	US-221 BYPASS
223BUS	US-223 BUSINESS ROUTE
22X	ALBERTA 22X
23RAVE	23RD AVENUE
23RDAV	23RD AVENUE
23RDST	23RD ST OK. CITY
23RDST	23RD STREET
23RDST	TWENTY-THIRD STREET
24-ALT	US-24 ALTERNATE ROUTE
24STW	24TH STREET WEST
258BUS	US-258 BUSINESS ROUTE
25A	RTE 25A
25C	RTE 25C
25THAV	25TH AVENUE

25THST	25TH STREET
264 -A	US-264 ALTERNATE ROUTE
264BUS	US-264 BUSINESS ROUTE
264BYP	US-264 BYPASS
270BUS	US-270 BUSINESS ROUTE
271BUS	US-271 BUSINESS ROUTE
275-B	BUSINESS RTE US-275
275RMP	I-275 EXIT RAMP
281SPR	US-281 SPUR
28A	ALBERTA 28A
295INT	I-295 INTERCHANGE
29A	LOCAL RTE 29A
29A	US 29A
29LOOP	I-29 BUSINESS LOOP
2A	ALBERTA 2A
2A	RTE 2A
2MIPKW	TWO MILE PARKWAY
2NDAVE	2ND AVENUE
2NDAVE	SECOND AVENUE
2NDSTR	2ND STREET
3-BUS	BUSINESS RTE 3
301BUS	US-301 BUSINESS ROUTE
3040SP	LA3040 SPUR
3066SP	LA3066 SPUR
30THST	30TH STREET
319BUS	RTE 319 BUSINESS
31A	BC RTE 31A
31E BR	US-31E BUSINESS ROUTE
31STBR	31ST STREET BRIDGE
321ALT	US-321 ALTERNATE ROUTE
340BUS	US-340 BUSINESS ROUTE
35RAMP	I-35 ACCESS RAMP
35SPUR	STATE ROUTE-35 SPUR
38B	RTE 38B
38BUS	RTE 38 BUSINESS
38C	RTE 38C
38THST	38TH STREET
39SPUR	STATE ROUTE 39 SUPR
3A	MA RTE 3A
3A	BC RTE 3A
3A	RTE 3A
3B	ON-3B
3RD ST	3RD STREET
3RD ST	THIRD STREET
3RD-ST	THIRD STREET

3RDSTR	3RD STREET
40	BIG HORN HIGHWAY
401BUS	RTE 401 BUS
401BUS	US-401 BUSINESS ROUTE
401BYP	US-401 BYPASS
40B	RTE 40B SARNIA
40STBR	40TH STREET BRIDGE
41 A	SK 41-A
421BUS	US-421 BUSINESS ROUTE
422BYP	US-422 BYPASS
42NDAV	42ND AVENUE
444ALT	OH-444 ALTERNATE ROUTE
44LOOP	I-44 BUSINESS LOOP
44SPUR	I-44 SPUR
45BYP	US 45 JACKSON BYPASS
45SPUR	MO-45 SPUR
47-ALT	NJ 47 ALTERNATE ROUTE
495RMP	I-495 ACCESS RAMP
49AV N	49TH AVENUE NORTH
4A	ALT RTE4
4TH ST	4TH STREET
50 ST	50 STREET
501BUS	US-501 BUSINESS
501BUS	US-501 BUSINESS ROUTE
501BYP	US-501 BYPASS
51STAV	51ST AVENUE
52A	RTE 52A
55LOOP	I-55 LOOP
56LOOP	OK-56 LOOP
56THAV	56TH AVENUE
56THST	56 ST INDIANAPOLIS
58A	ON RTE 58A
59THAV	59TH AVENUE
5TH AV	5TH AVENUE
60-BUS	MI-60 BUSINESS ROUTE
601BUS	US-601 BUSINESS ROUTE
60BYP	US60 BYPASS
60BYP	PA-60 BUSINESS BYPASS
61 AV	61ST AVENUE
61B	ON RTE 61B
61SPUR	US-61 SPUR
62BYP	62 BYPASS
62RAMP	US-62 ACCESS RAMP
63AVE	63 RD AVENUE
63RDST	63RD ST KANSAS CITY

64B	ROUTE 64B
66BYP	PA66TOLLBYP/A. HUTCHINS
66THAV	66TH AVENUE
69BLVD	69TH STREET BOULEVARD
69THST	69TH STREET
6RAMP	US-6 ACESS RAMP
6TH ST	6TH STREET
6THAVE	6TH AVENUE
6THSTR	6TH STREET
70A	US 70A
70LOOP	I-70 LOOP
71STST	71ST STREET
74BUS	RTE 74 BUSINESS
74RAMP	I-74 EXIT RAMP
75 ST	75 TH STREET
75CNTR	I75 CONNECTOR
75SPUR	STATE ROAD 75 SPUR
75SPUR	US-75 SPUR
78THAV	78TH AVENUE
7A	BC RTE 7A VANCOUVER
7A	ON RTE 7A
7B	ON RTE 7B
7THSTR	7TH STREET
8 MILE	8 MILE ROAD
80SPUR	STATE ROUTE 80 SPUR
81SPUR	STATE ROAD 81 SPUR
82 AVE	82 ND AVENUE
82 AVE	82ND AVENUE
84BUS	RTE 84 BUSINESS
84THST	84TH STREET
88	BICENTENNIAL HIGHWAY
8TH ST	8TH STREET
8TH-ST	8TH STREET
91A	BC RTE 91A VANCOUVER
92SPUR	MO-92 SPUR
93SPUR	US-93 SPUR
95RAMP	I-95 ACCESS RAMP
95SPUR	STATE ROUTE 95 SPUR
95THST	95TH STREET
96A	NY 96A
96RAMP	I-96 ACCESS RAMP
97 ST	97 STREET
98 AVE	98 AVENUE
99A	BC RTE 99A VANCOUVER
9L	RTE 9L

9P	RTE 9P
9THSTR	9TH STREET
A1A	FLORIDA ROUTE A1A
AB-1A	ALBERTA ROUTE 1A
AB-2A	ALBERTA ROUTE 2A
AB-41A	ALBERTA ROUTE 41A
AB2A	AB 2A
ABELRD	ABELL ROAD
ABRIEN	ABRIENDO AVENUE
ACADIN	ACADIAN THRUWAY
ACADMY	ACADEMY ROAD
ACEXP	ATLANTIC CITY EXPWAY
ACRAMP	I76/676 ACCESS RAMP
ACRAMP	ACCESS RAMP MA25/US6
ADAMS	ADAMS AVENUE
ADW/14	ADW JR/14TH ST BRIDGE
AHERN	AHERN ROAD
AIRACC	HARR. INT. AIR. ACCESS RD
AIRBAS	AIR BASE PARKWAY
AIRBAS	AIR BASE ROAD
AIRBAS	AIR BASE BOULEVARD
AIRLHY	AIRLINE HIGHWAY
AIRPOR	AIRPORT ACCESS ROAD
AIRPRD	AIRPORT ROAD
AIRPRT	AIRPORT ROAD
AIRPRT	SHREVEPORT ARPT ACCESS
AIRPRT	AIRPORT ROAD
AIRTHR	AIRPORT THRUWAY
AIRWAY	AIRPORT WAY
AK HWY	ALASKA HIGHWAY
ALABST	ALABAMA STREET
ALASWY	ALASKAN WAY
ALEMNY	ALEMANY BOULEVARD
ALGONR	DALGONQUIN ROAD
ALLBVD	ALLEGHENY RIVER BLVD
ALLERD	ALLEN ROAD
ALPIRD	ALPINE ROAD
ALSKAV	ALASKA AVENUE
ALT 19	ALTERNATE US 19
ALT 71	ALT US 71
ALT 75	ALTERNATE US 75
ALT 75	US-75 ALTERNATE ROUTE
ALT 75	ALT GA 75
ALT-1	ALTERNATE ROUTE RI-1
ALT-10	DE-10 ALTERNATE ROUTE

ALT-14	ALTERNATE ROUTE US-14
ALT-17	ALTERNATE ROUTE US-17
ALT-19	ALT RTE US-19
ALT-23	ALTERNATE ROUTE KS-23
ALT-27	ALTERNATE ROUTE US-27
ALT-27	ALTERNATE ROUTE GA-27
ALT-27	US-27 ALTERNATE ROUTE
ALT-27	ALTERNATE ROUTE US-27
ALT-29	ALTERNATE ROUTE US-29
ALT-32	ALT RTE MA-32
ALT-40	ALT RTE US-40
ALT-41	ALTERNATE ROUTE SC-41
ALT-52	ALTERNATE GA-52
ALT-58	ALT RTE US-58
ALT-72	ALTERNATE ROUTE ALT-72
ALT-77	ALTERNATE ROUTE US-77
ALT-89	ALT RTE US-89
ALT-89	ALT RTE AZ-89
ALT-90	ALTERNATE ROUTE US-90
ALT-98	ALTERNATE US-98
ALT-LT	RTE US-16
ALT1	ALT RTE 1
ALT113	ALT US RTE 113
ALT114	ALT RTE 114
ALT117	ALTERNATE ROUTE RI-117
ALT14	14ALT CT 14A
ALT201	ALT RTE US-201
ALT201	ALT US-201
ALT220	ALTERNATE RTE US-220
ALT221	ALTERNATE ROUTE US-221
ALT255	ALTERNATE GA 255
ALT301	ALT RTE 301
ALT41	ALTERNATE US41
ALT422	ALTERNATE ROUTE 422
ALT50	ALTERNATE US-50
ALT527	ALTERNATE COUNTY RTE 527
ALT66	ALT RTE 66
ALT69	ALT RTE US 69
ALT71	71ALT CT 71A
ALT93	ALTERNATE US-93
ALT95	ALTERNATE US-95
ALT97	ALTERNATE 97
ALT98	ALTERNATE US-98
ALTAMO	ALTAMONT AVE, ALBANY
ALTE-4	ALTERNATE ROUTE KS-4

ALTU22	ALTERNATE US22
ALTUS1	ALTERNATE ROUTE US-1
AMBDBR	AMBASSADOR BRIDGE
AMBOY	AMBOY ROAD
AMERFR	ALL AMERICAN FREEWAY
AMIHWY	AMITY-DAYTON HIGHWAY
ANACFY	ANACOSTIA FREEWAY
ANAFRY	ANACORTES-ORCAS FERRY
ANAHST	ANAHEIM STREET
ANDAVE	ANDERSON AVENUE
ANDRD	ANDERSON ROAD
ANDREW	ANDREWS ROAD
ANDRSN	ANDERSON LANE
ANVIRD	ANVILBLOCK ROAD
APRTRD	AIRPORT ROAD
APTEXP	EXPRESSWAY
AR-7 S	AR-7 SOUTH
AR129B	BUSINESS AR-129
AR4BUS	BUSINESS AR-4
AR7BUS	BUSINESS AR-7
ARCHAV	ARCHER AVENUE
ARGYRD	ARGYLL ROAD
ARKNSA	ARKANSAS AVENUE
ARLING	ARLINGTON PIKE
ARMORD	ARMOUR ROAD
ARPTCN	AIRPORT CONNECTOR
ASBURY	ASBURY ROAD
ASHBDR	ASHBY DRIVE
ASSEST	ASSEMBLY ST
ATBPKY	AUTOBON PARKWAY
ATLAVE	ATLANTIC AVENUE
AURFRY	AURORA FERRY
AUROAV	AURORA AVENUE
AVBLVD	AVIATION BLVD
AVE-A	AVENUE-A
AVERRD	AVERY ROAD
AZ85SP	ARIZONA 85 SPUR
B WAY	BROADWAY
B-I10G	BUSINESS I-10G
B-L RD	BROUGHTON-LIBRARY RD
B-PPKY	BRONX-PELHAM PARKWAY
B63	IOWA RTE B63
BABCOK	BABCOCK ROAD
BADGRD	BADGER ROAD
BAKEST	BAKER ST

BALTAV	BALTIMORE AVENUE
BALTPK	BALTIMORE PIKE
BANAVE	BANKHEAD AVENUE
BARNRD	BARNUM ROAD
BARNST	BARNSTABLE ROAD
BARRRD	BARRINGTON ROAD
BARSTO	BARSTOW ROAD
BARTR	BARLOW TRAIL
BARTRD	BARTON ROAD
BARTRM	BARTRAM AVENUE
BASLIN	BASELINE ROAD
BASSRD	BASS ROAD
BATTNL	BROOKLYN BATTERY TUNN
BAYBLV	BAYSHORE BOULEVARD
BAYBRG	BAYSIDE BRIDGE
BAYCRD	BAY CENTER ROAD
BAYCRD	BAY CENTER DIKE ROAD
BBBRDG	BURLINGTON BRISTOL BRDG
BC-17A	BC-17ALTERNATE
BC-3A	BRIT COLUMBIA ROUTE 3A
BC-3B	BRIT COLUMBIA ROUTE 3B
BC-5A	BRIT COLUMBIA ROUTE 5A
BC-95A	BRIT COLUMBIA ROUTE 95A
BC-97A	BRIT COLUMBIA ROUTE 97A
BC-97B	BRIT COLUMBIA ROUTE 97B
BC-97C	BRIT COLUMBIA ROUTE 97C
BC22A	BC RTE 22A
BC37A	BC RTE 37A
BEACHD	BEACH DRIVE
BEARHL	BEAR HILL ROAD
BEARPY	BEAR MOUNTAIN STA PKWY
BEARST	BEAR STREET
BEATRL	BEAVER TRAIL ROAD
BEAVER	BEAVER ISLAND FERRY
BEERRD	BEERS SCHOOL ROAD
BELFST	BELFAST ROAD
BELHWY	BELLEVUE-HOPEWELL HWY
BELHWY	BELT LINE HIGHWAY
BELHWY	BELLS FERRY HIGHWAY
BELLRD	BELL SCHOOL ROAD
BELLVU	BELLEVUE ROAD
BELVDR	BELVEDERE AVENUE
BENNBR	BENNING BRIDGE
BENNRD	BENNING ROAD
BENTON	BENTON ROAD

BESTPT	BESTPITCH ROAD
BETHEL	BETHEL ROAD
BETHPK	BETHLEHEM PIKE
BETHPY	BETHPAGE PARKWAY
BEVEST	BEVERLY STREET
BFBRDG	BENJAMIN FRANKLIN BRIDGE
BIGCYP	BIG CYPRESS ROAD
BIRARD	BIRANECK ROAD
BIRDRD	BIRD ROAD
BIRDVL	BIRDSVILLE ROAD
BIRMIN	BIRMINGHAM BRIDGE
BISHOP	BISHOP AVENUE
BITTRD	BITTER CREEK ROAD
BLADEN	BLADENSBURG ROAD
BLANRD	BLANTON ROAD
BLANST	BLANCHARD STREET
BLCKVL	BLACK VALLEY ROAD
BLDHWY	BOULDER HIGHWAY
BLGPKY	BLUE GRASS PARKWAY
BLKCAN	BLACK CANYON ROAD
BLKFT	BLACKFOOT TRAIL
BLKSTN	BLACKSTONE ROAD
BLNEXP	BEELINE EXPRESSWAY
BLNTPK	BERLIN TURNPIKE
BLOORD	BLOOMINGDALE ROAD
BLOSST	BLOSSOM ST
BLRPKY	BLUE RIDGE PARKWAY
BLTMOR	BALTIMORE AVENUE
BLUERD	BLUE RIM ROAD
BLWTBR	BLUE WATER BRIDGE
BNDCRN	BONDS CORNER ROAD
BOBHPE	BOB HOPE DRIVE
BOFALL	BOULEVARD OF THE ALLIES
BOMONT	BEAUMONT AVENUE
BORDER	BORDER AVENUE
BOVUE	BEAUVUE ROAD
BOWHIL	BOW HILL ROAD
BOWTR	BOW TRAIL
BOXCNY	BOX CANYON ROAD
BOXERD	BOXELDER ROAD
BOYDLN	BOYD LANE
BR 61	BUSINESS RTE 61
BR 9	BUSINESS RTE 9
BR54	BUSINESS RTE 54
BR63	BUSINESS RTE 63

BRADOK	BRADDOCK AVE
BRADOK	BRADDOCK ROAD
BRANFC	BRANFORD CONNECTOR
BRANRD	BRANCH ROAD
BRBRDG	BETSY ROSS BRIDGE
BRCHAV	BRANCH AVENUE
BRDFRD	BRADFORD ROAD
BRDGST	BRIDGE STREET
BRDWAY	BROADWAY STREET
BREFRY	BREMERTON-PRT ORCHD FRY
BRICE	BRICE HOLLOW RD BRDG
BRIDGS	BRIDGE STREET
BRIDRD	BRIDGE ROAD
BRIGHT	BRIGHTON ROAD
BRIGTN	BRIDGETOWN ROAD
BRKLBR	BROOKLYN BRIDGE
BRKNEK	BREAKNECK ROAD
BROAD	BROAD STREET
BROADW	BROADWAY
BROADW	BROADWAY STREET
BROAST	BROADWAY STREET
BRODWY	BROADWAY
BROORD	BROOKLAKE ROAD
BROWAY	BROADWAY
BROWBG	BROWARD BRIDGE
BROWNS	BROWNS HILL ROAD
BROWRD	BROWNING ROAD
BRUS50	BUSINESS ROUTE US 50
BRVPKY	BRONX RIVER PARKWAY
BRWYST	BROADWAY STREET
BUCKHI	BUCKHILL ROAD
BUCKLE	BUCKLEY ROAD
BUENRD	BUENA ROAD
BUKEYE	BUCKEYE ROAD
BULLRD	BULL FROG ROAD
BULLST	BULL ST
BULTDR	BULTMAN DRIVE
BURNSI	BURNSIDE AVE
BUS 1	BUS RTE 1
BUS 10	BUSINESS VA-10
BUS 15	BUSINESS RTE 15
BUS 2	BUS RTE 2
BUS 33	BUSINESS ROUTE NJ33
BUS 40	BUSINESS I-40
BUS 78	BUS RTE 78

BUS 83	BUS 83
BUS-11	BUS RTE US-11
BUS-12	US-12 BUSINESS ROUTE
BUS-15	BUS RTE US-15
BUS-17	BUSINESS RTE US-17
BUS-19	BUSINESS ROUTE US-19
BUS-20	BUS ROUTE US-20
BUS-23	BUS RTE US-23
BUS-27	BUS RTE US-27
BUS-29	BUS RTE US-29
BUS-30	BUS RTE US-30
BUS-40	BUS RTE I-40
BUS-58	BUSINESS RTE US-58
BUS-6	BUS RTE TX-6
BUS-69	BUSINESS RTE i-69
BUS-71	BUS RTE US-71
BUS-76	BUSINESS ROUTE US-76
BUS-83	BUSINESS ROUTE 83
BUS-94	BUS RTE I-94
BUS-96	I-96 BUSINESS ROUTE
BUS-98	BUSINESS US-98
BUS13	BUSINESS RTE US-13
BUS151	BUS RTE US-151
BUS167	BUSINESS ROUTE US167
BUS196	BUS RTE 196
BUS196	BUS RTE I-196
BUS21	BUSINESS RTE 21
BUS211	BUS RTE US-211
BUS220	BUSINESS RTE US-220
BUS25	BUSINESS RTE 25
BUS250	US-250 BUSINESS ROUTE
BUS287	BUSINESS US 287
BUS309	PA BUS ROUTE 309
BUS341	BUSINESS US-341
BUS360	BUS RTE US-360
BUS380	BUSINESS US 380
BUS460	BUS RTE US-460
BUS52	BUS 52
BUS60	BUSINESS US60
BUS65	BUS RTE US65
BUS72	BUSINESS RTE 72
BUS75	BUSINESS US 75
BUS80	BUSINESS RT I80
BUSHAV	BUSHWICK AVE
BUSI10	BUSINESS I-10

BUSI27	BUSINESS I-27
BUSI40	BUSINESS I-40
BUSI94	BUSINESS I-94
BUSUS2	BUS RTE US-2
BUTLER	BUTLER PIKE
BUTLER	BUTLER STREET
BWPKWY	BALTIMORE-WASHINGTON PKWY
BYBERY	BYBERRY ROAD
BYP	US79\45W HUMBOLDT BYPASS
BYP-20	BYPASS US-20
BYP1	RTE 1 BYPASS
BYP128	NH128 BYPASS
BYP31W	BYPASS US-31W
BYP41A	BYPASS US-41 ALTERNATE
BYP45	BYPASS US-45
BYRDAV	BYRD AVENUE
BYRNHW	BYRON HIGHWAY
C	COUNTY ROAD C
C 19	COUNTY ROAD 19
CA180A	CA-180 ALTERNATE
CABTR	CABOT TRAIL
CACTUS	CACTUS VALLEY ROAD
CAL TR	CALGARY TRAIL
CALICO	CALICO ROAD
CANAL	CANAL STREET
CANAM	CANAM HIGHWAY
CANBY	CANBY ST
CANLRD	CANAL ROAD
CANYRD	MCNEIL CANYON ROAD
CANYRD	CANYON ROAD
CANYRD	CANYONVILLE-RIDDLE ROAD
CAPCOR	CAPITOL CORRIDOR
CAPILA	CAPILANO DRIVE
CAPTXH	CAPITAL OF TEXAS HIGHWAY
CAREFR	CAREFREE HIGHWAY
CARLPK	CARLISLE PIKE
CARLTN	CARROLLTON AVENUE
CARSST	CARSON STREET
CASERD	CASE ROAD
CATAAV	CATAWBA AVENUE
CATFRY	CATAWB PT/PUT-IN-BAY FRY
CATORD	CATON FARM ROAD
CATORD	CATOOSA COUNTY ROAD
CAUSWY	CAUSEWAY BOULEVARD
CAVEND	CAVENDISH BLVD MONTREAL

CBPKWY	CLARA BARTON PARKWAY
CBRILO	CABRILLO HIGHWAY
CBRVRD	COLUMBIA RIVER RD
CCHWY	CROSS COUNTY HIGHWAY
CCLUBR	COUNTRY CLUB ROAD
CCOPKY	CROSS CO. PARKWAY
CCPKWY	COBBS CREEK PARKWAY
CDRGRV	CEDAR GROVE ROAD
CEARFO	SCEARFOSS PIKE
CEDARD	CEDAR MOUNTAIN ROAD
CEDAST	CEDAR STREET
CEDCAN	CEDAR CANYON ROAD
CEDRCR	CEDAR CREST BLVD
CENAVE	CENTRAL AVENUE
CENTAV	CENTRAL AVE
CENTER	CENTER STREET
CENTRD	CENTER POINT ROAD
CENTRL	CENTRAL PIKE
CENTRL	CENTRAL AVENUE
CEP DR	CEPILANO DRIVE
CERMRD	CERMAK ROAD
CHABLV	CHARLES BOULEVARD
CHABYP	WV-9/WV-340 CHARLE TWN BYPASS
CHAIN	CHAIN BRIDGE
CHALON	CHALONE CREEK ROAD
CHARAV	CHARTIERS AVE
CHARRD	CHARLES ROAD
CHATST	CHATHAM STREET
CHEFER	CHEYBOYGAN FERRY
CHIPWA	CHIPPEWA STREET
CHISKY	CHICAGO SKYWAY
CHITPK	CHICKASAW TURNPIKE
CHLTNM	CHELTENHAM AVENUE
CHOUTE	CHOUTEAU AVENUE
CHRLTN	CHARLESTON BOULEVARD
CHRSMN	CHRISMAN ROAD
CHSTRP	CHESTER PIKE
CHULA	CHULA-BROOKFIELD ROAD
CHURCH	CHURCH LANE
CHYNAV	CHEYENNE AVENUE
CIMARD	CIMA ROAD
CIRCDR	CIRCLE DRIVE
CITYAV	CITY AVENUE
CJPKWY	CABIN JOHN PARKWAY
CKS RD	CALEDONIA KOLOLA SHLTN RD

CLARK	CLARK AVENUE
CLARRD	CLARKELEN ROAD
CLAURD	CLAUDE HARMON ROAD
CLAYPW	WILL CLAYTON PARKWAY
CLAYST	CLAY STREET
CLEMRD	CLEMAN ROAD
CLINTN	CLINTON DRIVE
CLINTN	CLINTON ROAD
CMBPKY	CUMBERLAND PARKWAY
CMRTPK	CIMARRON TURNPIKE
CNRAMP	CONNECTING RAMP
CNSHKN	CONSHOHOCKEN ROAD
CNT-ES	COUNTY ROAD ES
CNT-HH	COUNTY ROAD HH
CNT-ID	COUNTY ROAD ID
CNT-KK	COUNTY ROAD KK
CNT-LS	COUNTY ROAD LS
CNT-MS	COUNTY ROAD MS
CNT-NN	COUNTY ROAD NN
CNT-PB	COUNTY ROAD PB
CNTLAV	CENTRAL AVENUE
CNTRST	CENTRE STREET
CNTY-A	COUNTY ROAD A
CNTY-B	COUNTY ROAD B
CNTY-C	COUNTY ROAD C
CNTY-F	COUNTY ROAD F
CNTY-G	COUNTY ROAD G
CNTY-H	COUNTY ROAD H
CNTY-I	COUNTY ROAD I
CNTY-L	COUNTY ROAD L
CNTY-N	COUNTY ROAD N
CNTY-O	COUNTY ROAD O
CNTY-P	COUNTY ROAD P
CNTY-Q	COUNTY ROAD Q
CNTY-R	COUNTY ROAD R
CNTY-S	COUNTY ROAD S
CNTY-W	COUNTY ROAD W
CO5940	COUNTY ROAD 5940
CO6240	COUNTY ROAD 6240
COBLVD	COLORADO BOULEVARD
COCHRN	COCHRAN ROAD
CODDHY	CODDINGTON HIGHWAY
COHFRY	COHO FERRY
COLDBR	COLD BROOK ROAD
COLFRY	COLUMBIA FERRY

COLIAV	COLINGWOOD AVENUE
COLLAV	COLLEGE AVENUE
COLLAV	COLLEGE AVE
COLLRD	COLLEGE ROAD
COLORD	COLONA ROAD
COLOST	COLORADO STREET
COLPKY	COLONIAL PARKWAY
COLUMB	COLUMBIA DRIVE
COLVAL	COLEMAN VALLEY ROAD
COMMON	COMMONWEALTH AVENUE
COMMST	COMMERCIAL STREET
COMRCE	COMMERCE AVENUE
CONBVD	CONDUIT BOULEVARD
CONCRD	CONCESSION RD
CONCRD	CONCORD STREET
CONNAV	CONNECTICUT AVENUE
CONNEC	CONNECTOR
CONNEL	CONNELL ROAD
CONNOR	CONNORS ROAD
CONSAV	CONSTITUTION AVENUE
COOKRD	COOK ROAD
COQHAL	COQUIHALLA HIGHWAY
COTCON	COTTEGE GROVE CONNECTION
COTEST	COTE ST LUC BLVD MONTREAL
COTMAN	COTTMAN AVENUE
COURRD	COURTHOUSE ROAD
CPTLBD	CAPITOL BOULEVARD
CRAIG	CRAIG ROAD
CRBLVD	CRYSTAL MOUNTAIN BLVD
CRCYHY	CROSS COUNTY HIGHWAY
CREAVE	CRESCENT AVENUE
CREHWY	CRESCENT LAKE HIGHWAY
CRETPK	CREEK TURNPIKE
CRIPKY	CROSS ISLAND PARKWAY
CRNST3	CROWSNEST HIGHWAY
CROCHN	CROCHERON ROAD
CROMWL	CROMWELL BRIDGE ROAD
CROSBY	CROSS BAY BLVD
CROWTR	CROWCHILD TRAIL
CRPKWY	CROWN VALLEY PARKWAY
CRWFRD	CRAWFORD AVENUE
CS RD	CALEDONIA STEENS ROAD
CT17A	CT17-A
CT182A	CT-182 A
CT2A	CT2A

CTTPK	CONNECTICUT TURNPIKE
CTY-A	COUNTY RTE A
CTY-B	COUNTY RTE B
CTY-C	COUNTY RTE C
CTY-CC	COUNTY ROAD CC
CTY-D	COUNTY RTE D
CTY-E	COUNTY RTE E
CTY-FF	COUNTY ROAD FF
CTY-H	COUNTY RTE H
CTY-J	COUNTY RTE J
CTY-K	COUNTY RTE K
CTY-KK	COUNTY RTE KK
CTY-M	COUNTY RTE M
CTY-MM	COUNTY RTE MM
CTY-PP	COUNTY RTE PP
CTY-U	COUNTY RTE U
CTY-V	COUNTY RTE V
CTY-Y	COUNTY ROAD Y
CTY-Z	COUNTY RTE Z
CTYB63	COUNTY ROAD B63
CTYJ40	COUNTY ROAD J40
CUCUMB	CUCUMBER HILL ROAD
CULHWY	CULVER HIGHWAY
CUMBAV	CUMBERLAND AVENUE
CURHOL	CURRY HOLLOW ROAD
CUTBLD	CUTTING BOULEVARD
CV RD	CALEDONIA VERNON ROAD
D26	IA D26
D37	IA D37
DALNTY	DALLAS NORTH TOLLWAY
DAMNEC	DAM NECK ROAD
DAVISO	DAVISON AVENUE
DAVIST	DAVIS ST
DAYLTP	DAYLIGHT PASS
DAYTON	DAYTON BOULEVARD
DBNPKY	DANIEL BOONE PARKWAY
DE AVE	DELAWARE AVENUE
DE1INT	DE-1 INTERCHANGE
DE2BUS	DE-2 BUSINESS ROUTE
DEGAUL	GENERAL DE GAULLE AVE
DELHWY	DELTA HIGHWAY
DELPAV	DELPHINE AVENUE
DENHWY	DENALI HIGHWAY
DENNRD	DENNIS MILL ROAD
DENNWY	DENNY WAY

DEWADR	DEWAR DRIVE
DEWARR	DE WARR ROAD
DEY RD	DEY ROAD
DGNEXP	DEEGAN EXPRESSWAY
DGTYRM	DAGGET YERMO ROAD
DIAMRD	DIAMOND RIDGE ROAD
DICAVE	DICKINSON AVENUE
DILHWY	DILLARD HIGHWAY
DILLON	DILLON ROAD
DIRKPW	DIRKSEN PARKWAY
DIVIRD	DIVIDE ROAD
DIXWEL	DIXWELL AVE
DLTNHY	DALTON HIGHWAY
DNVBYP	DANVILLE BYPASS
DOLEXP	DOLPHIN EAST-WEST EXPWY
DONEXP	DON SHULA EXPRESSWAY
DOVERB	DOVER BLUFF ROAD
DRAKST	DRAKE STREET
DRFTTR	DEERFOOT TRAIL
DRUID	DRUID HILL AVENUE
DTHVAL	DEATH VALLEY ROAD
DULACC	DULLES AIRPORT ACCESS RD
DULLCE	DULL CENTER ROAD
DULLES	DULLES ACCESS ROAD
DUNHRD	DUNHAM ROAD
DUNNE	DUNNE AVENUE
E ARAV	EAST ARKANSAS AVENUE
E MAIN	EAST MAIN STREET
E MAIN	EAST MAIN RD
E-ST	E STREET
E10TH	EAST 10TH AVE
E4THAV	EAST 4TH AVENUE
EAGHWY	EAGLE POINT HIGHWAY
EARHRT	EARHART BOULEVARD
EASTAV	EAST AVENUE
EASTON	EASTON ROAD
EASTRD	EAST END ROAD
EASTRD	EAST ROAD
EATONA	EATON AVE
EBASIN	EAST BASIN DRIVE
ECAPST	EAST CAPITOL STREET
EDGART	EDGARTOWN - TISBURY RD
EDGHWY	EDGERTON HIGHWAY
EFORDH	EAST FORDHAM ROAD
EGYPT	EGYPT ROAD

EHEWES	EVAN HEWES HIGHWAY
ELDORA	ELDORADO ROAD
ELEWIS	EAST LEWIS STREET
ELKSTR	ELK STREET
ELLIOT	ELLIOTT ISLAND ROAD
ELMEST	ELM EUGENE STREET
ELMRD	ELMIRA ROAD
ELMWAV	ELMWOOD AVE
ELWHRD	ELWHA RIVER ROAD
EMAUS	EMAUS STREET
ENJTPK	EASTERN SPUR NJ TPK
ERICDR	ERICKSON DRIVE
ESHORE	EAST SHORE ROAD
ESPARD	ESPANOLA ROAD
ESS-CH	ESSEX-CHARLOTTE FERRY
ESSEX	ESSEX ROAD
ESTERD	ESTERBROOK ROAD
ESTRLA	ESTRELLA ROAD
EVERGR	EVERGREEN RD
EVGPKY	EVERGLADES PARKWAY
EVTTPK	EVERETT TURNPIKE
EXPRES	AIRPORT EXPRESSWAY
F-5	F-5
F12	IOWA RTE F12
FABYPY	FABYAN PARKWAY
FANNIN	FANNIN ROAD
FARMIN	FARMINGTON ROAD
FARMRD	FARMINGTON ROAD
FAUFRY	FAUNTLEROY-VAUSHON FERRY
FAUNWY	FAUNTLEROY WAY
FAYETT	FAYETTE STREET
FDMEMB	F DOUGLASS MEM BRIDGE
FDRDRV	FRANKLIN D ROOSEVELT DR
FDRNAV	FINDERNE AVENUE
FED/WD	FEDERAL/CONG WLD DRIVE
FERNRD	FERN VALLEY ROAD
FERRY	CANADIAN FERRY
FERRY	US FERRY
FERRY	MX FERRY
FERRY	MACKINAC ISLAND FERRY
FERRY	ISLE ROYALE FERRY
FERRY	NANTUCKET FERRY
FERRY	DUKES FERRY
FERRY	DUKES - NANTUCKET FERRY
FERWAD	FERNLEY-WADSWORTH INTER

FFXPKY	FAIRFAX COUNTY PARKWAY
FIFTST	FIFTH STREET
FINKRD	FINK ROAD
FIRIRD	FIRING CENTER ROAD
FKLNBL	FRANKLIN BLVD
FL AVE	FLORIDA AVENUE
FL-10A	FLORIDA RTE 10A
FL-10A	FL-10A
FL-50A	FL-50A
FL-95A	FLORIDA ROUTE 95A
FL-99A	FLORIDA ROUTE 99A
FL-9A	FLORIDA ROUTE 9A
FL9336	FLORIDA ROUTE 9336
FLATAV	FLATBUSH AVENUE
FLTPK	FLORIDA TURNPIKE
FM-170	TEXAS RANCH ROAD 170
FM-187	TEXAS RANCH ROAD 187
FM-337	TEXAS RANCH ROAD 337
FM-470	TEXAS RANCH ROAD 470
FM1050	TEXAS RANCH ROAD 1050
FM116	TEXAS FARM ROAD 116
FM1584	TEXAS FARM ROAD 1584
FM1785	TEXAS FARM ROAD 1785
FM179	TEXAS FARM ROAD 179
FM1825	TEXAS FARM ROAD 1825
FM1947	TEXAS FARM ROAD 1947
FM1960	TEXAS FARM ROAD 1960
FM2920	TEXAS FARM ROAD 2920
FM297	TEXAS FARM ROAD 297
FM3005	FARM & MARKET 3005
FM51	TEXAS FARM ROAD 51
FM755	FARM ROAD 755
FM955	TEXAS FARM ROAD 955
FOOTHL	FOOTHILL ROAD
FOREDR	FOREST DRIVE
FOREST	FOREST AVENUE
FORHWY	FORT STEVENS HIGHWAY
FORKRD	FORK ROAD
FR1017	FARM ROAD 1017
FR1097	FARM ROAD 1097
FR1325	FARM ROAD 1325
FR1505	FARM ROAD 1505
FR1535	FARM ROAD 1535
FR1637	FARM ROAD 1637
FR1764	FARM ROAD 1764

FR1862	FARM ROAD 1862
FR1905	FARM ROAD 1905
FR1976	FARN ROAD 1976
FR2004	FARM ROAD 2004
FR2222	FARM ROAD 2222
FR2244	FARM ROAD 2244
FR2252	FARM ROAD 2252
FR2520	FARM ROAD 2520
FR2696	FARM ROAD 2696
FR2810	FARM ROAD 2810
FR3051	FARM ROAD 3051
FR3078	FARM ROAD 3078
FRANKA	FRANKLIN AVE
FRANST	FRANKLIN STREET
FREDOM	FREEDOM BOULEVARD
FREDRK	FREDERICK STREET
FREEMA	FREEMANSBURG AVE
FREMAN	FREEMAN ROAD
FREMNT	FREMONT STREET
FREMON	FREMONT ROAD
FRENCH	FRENCH STREET
FRIEND	FRIENDSHIP ROAD
FRIFRY	FRIDAY HARBOR-ORCAS FRY
FRKLRD	FRANKLIN ROAD
FRNTST	FRONT STREET
FRONT	FRONT STREET
FRONTS	FRONT STREET
FRVIEW	FAIRVIEW AVENUE
FRVWAV	FAIRVIEW AVENUE
FRY RD	FRY ROAD
FS4365	FAS 4365
FSKBRG	FRANCIS SCOTT KEY BRIDGE
FT MCH	FORT MCHENTY TUNNERL
FTDQBD	FORT DUQUESNE BLVD
FTHPKY	FOOTHILLS PARKWAY
G-C RD	GOLTS CALDWELL ROAD
GA AVE	GEORGIA AVENUE
GA-39C	GEORGIA ROUTE GA-39C
GA-77C	GEORGIA ROUTE GA-77C
GA-85E	GEORGIA ROUTE GA-85E
GA-85W	GEORGIA ROUTE GA-85W
GA1-LP	GA-1 LOOP
GA10BU	GA-10 BUSINESS ROUTE
GA10LP	GA-10 LOOP
GA119C	GEORGIA ROUTE GA-119C

GA119S	GA-119 SPECIAL ROUTE
GA11BY	GA-11 BYPASS
GA120C	GA-120 CONNECTOR
GA120L	GA-120 LOOP
GA121B	GA-121 WAYNESBORO BUSINESS RTE
GA122C	GA-122 CONNECTOR
GA128B	GA-128 BYPASS
GA12BY	GA-12 BYPASS
GA135B	GA-135 BYPASS
GA135L	GA-135 LOOP
GA136C	GA-136 CONNECTOR
GA137S	GA-137 SPUR
GA13CO	GA-13 CONNECTOR
GA141C	GA-141 CONNECTOR
GA144S	GA-144 SPECIAL ROUTE
GA149C	GA-149 CONNECTOR
GA14SP	GEORGIA 14 SPUR
GA15AL	GA-15 ALTERNATIVE ROUTE
GA169S	GA-169 SPECIAL ROUTE
GA17AL	GA-17 ALTERNATIVE ROUTE
GA17BY	GA-17 BYPASS
GA17CO	GA-17 CONNECTOR
GA18SP	GA-18 SPECIAL ROUTE
GA192S	GA-192 SPECIAL ROUTE
GA19BU	GA-16 BUSINESS ROUTE
GA1BUS	GA-1 BUSINESS ROUTE
GA204S	GA-204 SPECIAL ROUTE
GA206C	GA-206 CONNECTOR
GA21BU	GA-21 BUSINESS ROUTE
GA22CO	GA-22 CONNECTOR
GA22SP	GA-22 SPECIAL ROUTE
GA23EA	GA-23 EAST
GA23WE	GA-23 WEST
GA240C	GA-240 CONNECTOR
GA247S	GA-247 SPECIAL ROUTE
GA253S	GA-253 SPECIAL ROUTE
GA25CO	GA-25 CONNECTOR
GA25SP	GEORGIA 25 SPUR
GA25SP	GA-25 SPECIAL ROUTE
GA270S	GA-270 SPUR
GA293C	GA-293 CONNECTOR
GA300C	GA-300C
GA301B	GA-301 BUSINESS ROUTE
GA302S	GA-302 SPECIAL ROUTE
GA30CO	GA-30 CONNECTOR

GA322S	GA-322 SPECIAL ROUTE
GA33CO	GA-33 CONNECTOR
GA34BY	GA-34 BYPASS
GA37CO	GA-37 CONNECTOR
GA38BU	GA-38 BUSINESS ROUTE
GA38CO	GA-38 CONNECTOR
GA38SP	GA-38 SPUR
GA3CON	GA-3 CONNECTOR
GA404S	GA-404 SPECIAL ROUTE
GA41CO	GA-41 CONNECTOR
GA43BY	GA-43 BYPASS
GA441B	GA-441 BYPASS
GA44SP	GA-44 SPECIAL ROUTE
GA46CO	GA-46 CONNECTOR
GA49CO	GA-49 CONNECTOR
GA4ALT	GA-4 ALTERNATIVE ROUTE
GA4BUS	GA-4 BUSINESS ROUTE
GA4NOR	GA-4 NORTH
GA4SOU	GA-4 SOUTH
GA520B	GA-520 BUSINESS ROUTE
GA53CO	GA-53 CONNECTOR
GA53SP	GA-53 SPUR
GA56SP	GA-56 SPECIAL ROUTE
GA5BUS	GA-5 BUSINESS ROUTE
GA5SPU	GA-5 SPUR
GA60BU	GA-60 BUSINESS ROUTE
GA62BP	GA-62 BYPASS
GA67BY	GA-67 STATESBORO BYPASS
GA67LP	GA-67 LOOP
GA6BUS	GA-6 BUSINESS ROUTE
GA73BY	GA-73 BYPASS
GA73LP	GA-73 LOOP
GA74EA	GA-74 EAST
GA76CO	GA-76 CONNECTOR
GA77CO	GA-77 CONNECTOR
GA77SP	GA-77 SPECIAL ROUTE
GA7ALT	GA-7 ALTERNATE ROUTE
GA80AL	GA-80 ALTERNATE ROUTE
GA82SP	GA-82 SPECIAL ROUTE
GA85CO	GA-85 CONNECTOR
GA91AL	GA-91 ALTERNATE ROUTE
GA91SP	GA-91 SPECIAL ROUTE
GA97CO	GA-97 CONNECTOR
GAETZ	GAETZ AVENUE
GALATN	GALLATIN PIKE

GALILE	GALILEE ROAD
GALLTN	GALLATIN STREET
GANDY	BRIDGE
GARDEN	GARDEN HIGHWAY
GARFBD	GARFIELD BOULEVARD
GARRET	GARRETT ROAD
GCPKY	GRAND CENTRAL PARKWAY
GENERA	GENERAL BOOTH ROAD
GENEST	GENESEE STREET
GENRLS	GENERALS HIGHWAY
GGBRDG	GOLDEN GATE BRIDGE
GILLST	GILLESPIE STREET
GIRARD	GIRARD AVENUE
GLEHWY	GLENN HIGHWAY
GLENN	GLENN BOULEVARD
GLENRD	GLEN COVE ROAD
GLENRM	GLENARM ROAD
GLENRR	DGLENRIDGE ROAD
GLMRTR	GLENMORE TRAIL
GLNDAL	GLENDALE AVENUE
GMB&RB	G.MASON/ROCHEAMBEAU BRIDGE
GNZRIV	GONZALES RIVER ROAD
GODSBR	BRIDGE OF THE GODS
GOETHB	GOETHALS BRIDGE
GOLDN	GOLDEN STREET
GOLFRD	GOLF ROAD
GOODNG	GOODING AVENUE
GOODRD	GOODMAN ROAD
GOTSUN	GOING-TO-THE-SUN HWY
GRANAV	GRAND AVENUE
GRAND	GRAND AVENUE
GRAND	GRAND STREET
GRANDB	GRAND ISLAND BRIDGE
GRANDB	GRAND BOULEVARD
GRANRD	GRAND LOOP ROAD
GRAVOI	GRAVOIS AVENUE
GREEN	GREEN STREET
GREENB	GREENBRIER ROAD
GREENT	GREENTREE
GREYRD	GREYBULL RIVER ROAD
GRIFTH	GRIFFITH NECK ROAD
GRISWO	GRISWOLD AVENUE
GRIZRD	GRIZZLY MOUNTAIN ROAD
GRMNTN	GERMANTOWN PIKE
GRNDAV	GRAND AVENUE

GRNGVL	GRANGEVILLE BOULEVARD
GROAT	GROAT ROAD
GRVPKY	GREEN RIVER PARKWAY
GSPCON	GARDEN STATE PARKKWAY CONNECTION
GSPKY	GARDEN STATE PARKWAY
GUNRDG	UN HILL ROAD
GWMPKY	G.WASHINGTON MEMORIAL PARKWAY
GWSHBR	GEORGE WASHINGTON BRIDGE
H-C.RD	HILLIARD-CEMETERY RD
H-ST	H STREET
HABLVD	HARBOR BOULEVARD
HALSST	HALSTEAD STREET
HAMAVE	HAMPDEN AVENUE
HAMCON	HAMMONASSET CONNECTOR
HARDY	HARDY STREET
HARDYT	HARDY TOLLROAD
HARPRD	HARPER-WESTFALL ROAD
HARRIS	HARRISON AVENUE
HARTFD	HARTFORD ROAD
HAYFRD	HAYFORD ROAD
HAYWRD	HAYWIRE ROAD
HAZLE	HAZLE AVE
HEBTPK	H.E. BAILEY TURNPIKE
HENRY	HENRY AVENUE
HENRYS	HENRYS CROSSROADS ROAD
HHPKY	HENRY HUDSON PARKWAY
HIGHRD	HIGH POINT ROAD
HIGHST	HIGH STREET
HIGLST	HIGLEY STREET
HILAND	HIGHLAND AVENUE
HILAND	HIGHLAND AVENUE
HILAND	HIGHLAND ROAD
HILLRD	BRIDGEPORT HILL ROAD
HILTOP	HILLTOP DRIVE
HINES	HINES ROAD
HINKLE	HINKLE ROAD
HNLKRD	HANSON LAKE ROAD
HOBSON	HOBSON WAY
HOLEXP	HOLLAND EAST-WEST EXPWY
HOLLOW	HOLLOW ROAD
HOLMAV	HOLMES AVENUE
HOLTNL	HOLLAND TUNNEL
HOOKRD	HOOK ROAD
HOOPER	HOOPER ISLAND ROAD
HOPEAV	HOPE AVENUE

HOPEVA	HOPE VALLEY ROAD
HORSRD	HORSESHOE LAKE ROAD
HOWARD	HOWARD ROAD
HRPKY	HUTCHINSON RIVER PKWY
HRSBRG	HARRISBURG PIKE
HRSGRD	HARRIS GRADE ROAD
HRVDRV	HARLEM RIVER DRIVE
HTTHRU	HARBOR TUNNEL THRUWAY
HUBBRD	HUBBARD ROAD
HUDSRD	HUDSON ROAD
HUENME	HUENEME ROAD
HUNAVE	HUNTINGTON AVENUE
HURSRD	HURST ROAD
HVRFRD	HAVERFORD AVENUE
HYDERD	NEW HYDE PARK ROAD
I-15B	INTERSTATE 15B
I-20SP	INTERSTATE 20 SPUR
I-25BU	I-25 BUSINESS ROUTE
I-35B	BUSINESS I-35
I-35E	INTERSTATE RTE I-35 EAST
I-35W	INTERSTATE RTE I-35 WEST
I-70BU	I-70 BUSINESS ROUTE
I-85CN	I-85 CONNECTOR
I-8BUS	BUSINESS I-8
I-97AP	I-97 ACCESS RAMP
I15BUS	BUSINESS ROUTE I-15
I15INT	INTERCHANGE RAMP I-15
I180BU	I-180 BUSINESS ROUTE
I19BUS	BUSINESS I-19
I25BUS	I-25 BUSINESS ROUTE
I276IN	I-276 INTERCHANGE RAMP
I290EX	I-290 EXTENSION
I35ACC	I-35 ACCESS ROAD
I40BUS	I-40 BUSINESS ROUTE
I40CON	I-40 CONNECTION
I495AR	I-495 ACCESS RAMP
I4INTG	I-4 INTERCHANGE RAMP
I610EL	I-610 EAST LOOP
I610NL	I-610 NORTH LOOP
I610SL	I-610 SOUTH LOOP
I610WL	I-610 WEST LOOP
I70BUS	I-70 BUSINESS ROUTE
I74CON	I-74 CONNECTOR
I75BUS	I-75 BUSINESS ROUTE
I75CON	I-75 - MI-13 CONNECTOR

I80BUS	I80 BUSINESS ROUTE
I80CON	I-80 CONNECTOR
I83BUS	I-83 BUSINESS
I84BUS	BUSINESS ROUTE I-84
I85BUS	BUSINESS I-85
I88CON	I-88 CONNECTOR
I90BUS	BUSINESS ROUTE I-90
I90CON	I-90 CONNECTOR
I90INT	I-90 INTERCHANGE RAMP
I95BUS	I-95 BUSINESS ROUTE
I95INT	I-95 INTERCHANGE RAMP
ILTOLI	LLINOIS EAST-WEST TOLL RD
IMPHWY	IMPERIAL HIGHWAY
IN9BUS	IN-9 BUSINESS ROUTE
INDEAV	INDEPENDENCE AVENUE
INDTPK	INDIAN NATION TURNPIKE
INNIST	EAST INNIS STREET
INTBDG	INTERNATIONAL BRIDGE
INTBRD	INTERNATIONAL BORDER
INTERD	INTERNATIONAL AIRPORT RD
INTERP	INTERBOROUGH PARKWAY
INTFLB	INTERNATIONAL FALLS BR
INTFRY	INTERNATIONAL FERRY
INTLPW	INTERNATIONAL PARKWAY
INTOL	INDIANA EAST-WEST TOLL ROAD
IRONAG	IRONAGE ROAD
IRVING	IRVING STREET
IRWIN	FORT IRWIN ROAD
ISLAND	ISLAND ROAD
J-ST	J-STREET
JACKSO	JACKSON FLAT ROAD
JAMAIC	JAMAICA WAY
JAMERD	JAMES ROAD
JAMEST	JAMES STREET
JAMSTF	JAMESTOWN FERRY
JASPER	JASPER AVENUE
JE D'A	JEANNE D'ARC BLVD
JFKBLV	JOHN F KENNEDY BLVD
JFKHWY	JFK MEMORIAL HIGHWAY
JLBLVD	JOHN LAURIE BLVD
JNCTBD	JUNCTION BOULEVARD
JOEHWY	JOE WHEELER HIGHWAY
JOSHUA	JOSHUA ROAD
JPSBRG	JOHN PHILLIP SOUSA BRIDGE
K-ST	K STREET

KELBKR	KELBAKER ROAD
KELFRY	KELLEYS ISL/PUT-IN-BAY
KELLOG	KELLOGG AVENUE
KENHWY	KENAI SPUR HIGHWAY
KENMOR	KENMORE AVENUE
KENPKY	KENNEDY PARKWAY
KEYSER	KEYSER AVE
KEYWAL	KEY WALLACE DRIVE
KICKRD	KICKAPOO-EDWARDS ROAD
KILPTP	JOHN KILPATRICK TURNPIKE
KINGSH	KINGSHIGHWAY BLVD
KIRBAV	KIRBY AVENUE
KIRKRD	KIRK ROAD
KNLWRT	KENILWORTH AVENUE
KNOWLE	KNOWLES WAY
KS153S	KANSAS 153 SPUR
KSTPK	KANSAS TURNPIKE
KTARMP	KANSAS TURNPIKE OFFRAMP
KTLCRK	KETTLE CREEK ROAD
KY1000	KY1000
KY1005	KY1005
KY1006	KY1006
KY1009	KY1009
KY1010	KY1010
KY1019	KY 1019
KY1026	KY1026
KY1032	KY1032
KY1038	KY1038
KY1051	KY1051
KY1052	KY1052
KY1054	KY1054
KY1056	KENTUCKY 1056
KY1057	KY1057
KY1065	KY1065
KY1083	KY1083
KY1091	KY1091
KY1099	KY1099
KY1105	KY1105
KY1129	KY1129
KY1132	KY1132
KY1140	KY1140
KY1155	KY1155
KY1159	KY1159
KY1160	KY1160
KY1178	KY1178

KY1193	KY1193
KY11BS	KY11 BUSINESS
KY1206	KY1206
KY1207	KY1207
KY1235	KY1235
KY1247	KY1247
KY1247	KY1247
KY1249	KY1249
KY1257	KY1257
KY1262	KY1262
KY1268	KY1268
KY1274	KY1274
KY1293	KY1293
KY1295	KY1295
KY1297	KY1297
KY1319	KY1319
KY1325	KY1325
KY1330	KY1330
KY1332	KY1332
KY1346	KY1346
KY1348	KY1348
KY1349	KY1349
KY1351	KY1351
KY1366	KY1366
KY1377	KY1377
KY1389	KY1389
KY1393	KY1393
KY1402	KY1402
KY1410	KY1410
KY1421	KY1421
KY1422	KY1422
KY1428	KY1428
KY1447	KY1447
KY1498	KY1498
KY1499	KY1499
KY1523	KY 1523
KY1529	KY1529
KY1533	KY1533
KY1544	KY1544
KY1571	KY1571
KY1578	KY1578
KY1579	KY1579
KY1590	KY1590
KY15SP	KY15 SPUR
KY1638	KY1638

KY1651	KY1651
KY1678	KY1678
KY1682	KY RTE 1682
KY1684	KY1684
KY1688	KY1688
KY1693	KY1693
KY1697	KY1697
KY1718	KY1718
KY1751	KY1751
KY1785	KY1785
KY1812	KY1812
KY1848	KY1848
KY1865	KY1865
KY1940	KY RTE 1940
KY1954	KY1954 - HUSBAND ROAD
KY1958	KY RTE 1958
KY1974	KY1974
KY1993	KY1993
KY2010	KY2010
KY2239	KY2239
KY2247	KY2247
KY2376	KY2376
KY2377	KY2377
KY2600	KY2600
KY3005	KY3005
KY3182	KY3182
KY3204	KY3204
KY32BS	KY32 BUSINESS
L-79G	LOCAL 79-G
L-A AV	E. LONG ISLAND ATLANTIC AVE
L-M FY	LUDINGTON-MANITOWAC FERRY
LA AVE	LOUISIANA AVENUE
LA1024	LA1024
LA1048	LA1048
LA1054	LA1054
LA1055	LA1055
LA1061	LA1061
LA1077	LA1077
LA1083	LA1083
LA1111	LA1111
LA1126	LA1126
LA1200	LA1200
LA1223	LA1223
LA1226	LA1226
LA14BY	LA-14 BYPASS

LA1BUS	LA-1 BUSINESS ROUTE
LA2ALT	LA-2 ALTERNATE
LA3000	LA3000
LA3007	LA3007
LA3015	LA3015
LA3017	LA3017
LA3025	LA3025
LA3032	LA3032
LA3036	LA3036
LA3040	LA3040
LA3046	LA3046
LA3052	LA3052
LA3063	LA3063
LA3064	LA3064
LA3066	LA3066
LA3081	LA3081
LA3087	LA3087
LA3089	LA3089
LA3094	LA3094
LA3102	LA3102
LA3105	LA3105
LA3125	LA3125
LA3127	LA3127
LA3128	LA3128
LA3129	LA3129
LA3131	LA3131
LA3132	LA3132
LA3134	LA3134
LA3138	LA3138
LA3139	LA3139
LA3141	LA3141
LA3152	LA3152
LA3154	LA3154
LA3160	LA3160
LA3164	LA3154
LA3168	LA3168
LA3177	LA3177
LA3184	LA3184
LA3185	LA3185
LA3188	LA3188
LA3199	LA3199
LA3213	LA3213
LA3214	LA3214
LA3218	LA3218
LA3226	LA3226

LA3231	LA3231
LA3246	LA3246
LA3265	LA3265
LA41SP	LA-41 SPUR
LA6BUS	LA-6 BUSINESS ROUTE
LA70SP	LA-70 SPUR
LA77SP	LA77 SPUR
LACKAW	LACKAWANNA AVE
LAKCRP	LAKESVILLE CARPO ROAD
LAKEAV	LAKE AVENUE
LAKEBV	LAKE REEDY BLVD
LAKEMD	LAKE MEAD BOULEVARD
LAKERD	LAKE COOK ROAD
LAKEST	LAKE ST RAMSEY
LAKMRY	LAKE MARY ROAD
LAMBBD	LAMD BOULEVARD
LANCRD	LANCE CREEK ROAD
LANDER	LANDER ANENUE
LANGWR	LANGWORTHY ROAD
LANINI	LANINI ROAD
LANPIK	LANCASTER PIKE
LARIMR	LARIMER AVENUE
LARKAV	LARK AVENUE
LASALL	LASALLE
LC100A	COUNTY ROUTE 100A
LC3000	LOCAL 3000
LCNTNL	LINCOLN TUNNEL
LEBANO	LEBANON-CHURCH ROAD
LECFRY	LECONTE FERRY
LEHIGH	LEHIGH DRIVE
LEHIGH	LEHIGH STREET
LEMORD	LEMONT ROAD
LEVERD	LEVEE ROAD
LEWDR	LEWVAN DRIVE
LIBERD	OLD LIBERTY ROAD
LIBERD	LIBERTY ROAD
LIBERT	LIBERTY BRIDGE
LIBRTY	LIBERTY STREET
LIBTNL	LIBERTY TUNNELS
LIEXP	LONG ISLAND EXPRESSWAY
LINAVE	LINCOLN AVENUE
LINBVD	LINCOLN BOULEVARD
LINCAV	LINCOLN AVENUE
LINCOL	LINCOLN HIGHWAY
LINDEN	LINDEN STREET

LINERD	BELT LINE ROAD
LINKE	LINKE ROAD
LINWAY	LINCOLN WAY
LITCH	LITCHFIELD ROAD
LITTRD	LITTLE MISSOURI ROAD
LIVING	LIVINGSTON ROAD
LNCOLN	LINCOLN DRIVE
LNCSTR	LANCASTER AVENUE
LNGRNP	LONG GREEN PIKE
LNSDWN	LANSDOWNE AVENUE
LOBLVD	LONG BEACH BOULEVARD
LOCKDR	LOCKWOOD DRIVE
LOCKXP	LOCKPORT EXPRESSWAY
LOCURD	LOCUST GROVE ROAD
LOMAS	LOMAS BOULEVARD
LOMBRD	LOMBARD STREET
LONDON	LONDON RD SARNIA
LONGFE	LONGFELLOW BRIDGE
LONGRD	LONG HILL ROAD
LOOKOU	LOOKOUT DRIVE
LOOP12	TEXAS LOOP 12
LOOP44	LOOP 44
LOOP55	BUS RTE I-55
LOSPKY	LAKE ONTARIO ST. PARKWAY
LOSTRD	LOST CABIN ROAD
LOSVAL	LOS VALLEY ROAD
LOWELL	LOWELL CONNECTOR
LOWERD	LOWER PARSON CUTTOFF ROAD
LRLPKY	LAURELTON PARKWAY
LSBLVD	LAKE SHORE BOULEVARD
LSTREE	L STREET
LUZERN	LUZERNE STREET
LVBLVD	LAS VEGAS BOULEVARD
LWRNCE	LAWRENCE ROAD
LYNNHA	LYNNHAVEN PARKWAY
LYONRD	LYONS ROAD
LYSIRD	LYSITE MONETA ROAD
M-ST	M STREET
M48	IA M48
MA-1A	MASS ROUTE 1A
MA-20A	MA-20 A
MA-2A	RT 2A
MA-6A	MASS RTE 6A
MA-8A	MASS RTE 8A
MA127A	MA127A

MA2A	MA2A
MACARD	MACARTHUR ROAD
MACART	MACARTHUR BOULEVARD
MACLAY	MACLAY STREET
MACLTR	MACLEOD TRAIL
MADISN	MADISON AVENUE
MADISN	MADISON STREET
MADISO	MADISON AVENUE
MADSON	MADISON STREET
MAGNLA	MAGNOLA AVENUE
MAHERD	MAHER ROAD
MAINAV	MAIN AVE SCRANTON AREA
MAINE	MAINE STREET
MAINST	MAIN ST WHARTON
MAINST	MAIN ST
MAINST	SOUTH MAIN ST, CARIBOU
MALFRY	MALASPINA FERRY
MAMAVE	MAMARONECK AVENUE
MAN DR	MANNING DRIVE
MANCHE	MANCHESTER AVENUE
MANFRY	MATANUSKA FERRY
MANHBR	MANHATTAN BRIDGE
MANITO	MANITOU ISLANDS FERRY
MANOR	MANOR ROAD
MANSBR	MANSFIELD BRIDGE
MANWAR	MAN-O-WAR BOULEVARD
MAPLE	MAPLE DAM ROAD
MAPLST	MAPLE STREET
MARFRY	MARBLEHEAD/KELLEYS ISL
MARKET	MARKET STREET
MARKST	MARKET STREET
MARQTR	MARQUIS OF LORNE TRAIL
MARTIN	MARTIN LUTHER KING BLVD
MARTWY	MARTIN WAY
MASONH	MASON HAYES ROAD
MASSAV	MASSACHUSETTS AVENUE
MATHIS	MATHIS-JULIA DRIVE
MATPK	MASSACHUSETTS TURNPIKE
MATSON	MATSONS FORD ROAD
MATTAV	MATTIS AVENUE
MAXONR	MAXON ROAD
MAXWRD	MAXWELL ROAD
MAYAVE	MAY AVENUE
MAYFD	MAYFIELD ROAD
MBILHY	MOBILE HIGHWAY

MCARTY	MCARTY STREET
MCCAIN	MCCAIN BOULEVARD
MCDADE	MAC DADE BOULEVARD
MCG RD	McGUIRE AFB ACCESS ROAD
MCGEE	MCGEHEE ROAD
MCK-DU	QMCKEESPORT DUQUESNE BRIDGE
MCKEES	MCKEESPORT BLVD
MD404B	MD-404 BUSINESS
MD5BUS	MD-5 BUSINESS
MDLTWN	MIDDLETOWN ROAD
MDWPKY	MEADOWBROOK STATE PARKWAY
ME--4A	ME 4A
MEA100	STATE ROAD A100
MEDIRD	MEDICINE BOW ROAD
MEETRD	MEETEETSE ROAD
MEMDR	MEMORIAL DR MONTPELIER
MEMDR	MEMORIAL DRIVE
MEMORI	MEMORIAL DRIVE
MEMPKY	MEMORIAL PARKWAY
MERIRD	MERIDIAN ROAD
METPK	MAINE TURNPIKE
METZRD	METZ ROAD
MI28BU	MI-28 BUSINESS ROUTE
MICHAV	MICHIGAN AVENUE
MIDLTN	MIDDLETOWN ROAD
MIDVRD	MIDVALE ROAD
MIFFLN	MIFFLIN ROAD
MILBRA	MILLBRAE AVENUE
MILCUT	MILITARY CUTOFF
MILFOR	MILFORD AVENUE
MILIRD	MILITARY ROAD
MILITA	MILITIA HILL ROAD
MILLRD	HALLS MILLS ROAD
MILLRD	MILL ROAD
MINERD	MINERAL ROAD
MINNDR	MINNESOTA DRIVE
MISNBL	MISSION BOULEVARD
MISSAV	MISSISSIPPI AVENUE
MISSON	MISSION ROAD
MITHWY	MITKOF HIGHWAY
MKBLVD	MCKNIGHT BLVD
MLK BD	ML KING JR BLVD
MLKBLD	MARTIN LUTHER KING BLVD
MMMBRG	MONITOR-MERRIMAC MEM BRIDGE
MNCKRD	MIDDLE NECK ROAD

MNRLKG	MINERAL KING ROAD
MNTNAV	MOUNTAIN AVENUE
MNTREY	MONTEREY ROAD
MO AVE	MISSOURI AVENUE
MO-5BU	MO-5 BUSINESS ROUTE
MO13BU	MO-13 BUSINESS ROUTE
MO37BU	MO-37 BUSINESS ROUTE
MOGOLN	MOGOLLON RIM
MOLIDR	MOLINE DRIVE
MONMBD	MONMOUTH BOULEVARD
MONROE	MONROE ROAD
MONTCN	MONTVILLE CONNECTOR
MOOSUP	MOOSUP VALLEY ROAD
MOPAC	MOPAC EXPRESSWAY
MOREAV	MOREHEAD AVENUE
MORGRD	MORGANVILLE RIDGE ROAD
MORISN	MORRISON SPRING ROAD
MORRIS	MORRISON BRIDGE
MOSPKY	ROBERT MOSES PARKWAY
MOYAMN	MOYAMENSING AVENUE
MRCKBR	MCKEE'S ROCK BRIDGE
MRGNRD	MORGAN RD
MRKTST	MARKET STREET
MRSHAL	MARSHALL ROAD
MRTPKY	MERRITT PARKWAY
MS-9W	MS-9 WEST
MSKTPK	MUSKOGEE TURNPIKE
MT200S	MONTANA ROUTE 200S
MTGHSE	MEETING HOUSE LANE
MTHOUS	MOUNTAIN HOUSE ROAD
MTNAST	MONTANA STREET
MTNAVE	MONTANA AVENUE
MTPKY	MOUNTAIN PARKWAY
MTRYDR	MILITARY DRIVE
MULLEN	MULLEN HILL ROAD
MURPHY	MURPHY ROAD
MX-45D	MEXICO ROUTE 45D
MX-57D	MEXICO ROUTE 57D
MX-85D	MEXICO ROUTE 85D
MX-95D	MEXICO ROUTE 95D
MX115D	MEXICO ROUTE 115D
MX132D	MEXICO ROUTE 132D
MX150D	MEXICO ROUTE 150D
MX180D	MEXICO ROUTE 180D
MX190D	MEXICO ROUTE 190D

MYRHWY	MYRTLE CREEK HIGHWAY
N EDDY	NORTH EDDY STREET
N MAIN	NORTH MAIN ROAD
N OREG	NORTH OREGON STREET
N14ST	NORTH 14TH STREET
NACILK	NACIMIENTO LAKE DRIVE
NAKOMA	NAKOMA MONROE AVENUE
NAPERD	NAPERVILLE ROAD
NARRAG	NARRAGANSETT AVENUE
NARURD	NARROWS RUN ROAD
NASA1	NASA 1 ROAD
NASH-H HWY	NASHUA-HUDSON CIRCUM
NASHAV	NASH AVENUE
NASPKY	NASA PARKWAY
NASSAU	NASSAU EXPRESSWAY
NATHWY	NATIONAL PARK HIGHWAY
NATLAV	NATIONAL AVENUE
NAVIG	NAVIGATION AVENUE
NC130B	NC-130 BUSINESS ROUTE
NC226A	NC-226 A
NCAPST	NORTH CAPITOL STREET
NCHRCH	NORTH CHURCH AVENUE
ND1804	NORTH DAKOTA 1804
ND1806	NORTH DAKOTA 1806
ND200A	NORTH DAKOTA 200A
NE AVE	NEBRASKA AVE
NE FWY	NORTHEAST FREEWAY
NE-BYP	NORTHEAST BYPASS-RIVER DRIVE
NEILAV	NEILL AVENUE
NEILST	NEIL STREET
NERAVE	NE 3RD AVENUE
NES16F	NEBRASKA ROUTE S16F
NES4A	NES4A
NETHRU	NEW ENGLAND THRUWAY
NEVILL	NEVILLW ISLAND ROAD
NEW-BI	NEWPORT BLOCK ISLAND FERRY
NEWMRD	NEWMAN ROAD
NEWPRT	NEWPORTVILLE ROAD
NGHBOR	NEIGHBORS BOULEVARD
NGUIGD	NORTH GUIGNARD DRIVE
NH AVE	NEW HAMPSHIRE AVENUE
NH-16A	NH ROUTE 16A
NH-16B	NH ROUTE 16B
NH103A	NH ROUTE 103A

NH103B	NH ROUTE 103B
NH107A	NH ROUTE 107A
NH110B	NH ROUTE 110B
NH111A	NH ROUTE 111A
NH113A	NH ROUTE 113A
NH115A	NH ROUTE 115A
NH11B	NH ROUTE 11B
NH11C	NH ROUTE 11C
NH121A	NH ROUTE 121A
NH123A	NH ROUTE 123A
NH12A	NH ROUTE 12A
NH155A	NH ROUTE 155A
NH1B	NH RTE 1B
NH25B	NH ROUTE 25B
NH3A	NH ROUTE 3A
NHTPK	NEW HAMPSHIRE TURNPIKE
NICHRD	NICHOLS ROAD
NILTOL	NORTHWST ILLINOIS TOLL ROAD
NIMITZ	NIMITZ BOULEVARD
NINERD	NINE CANYON ROAD
NIPTON	NIPTON ROAD
NJTPK	NEW JERSEY TURNPIKE
NJTPKX	NEW JERSEY TURNPIKE EXT
NL-BIF	NEW LONDON-BLOCK ISL FRY
NMCCBD	NORTH MCCARRAN BLVD
NO24ST	NORTH 24TH STREET
NOLBRG	NOLAN TOLL BRIDGE
NORAVE	NORTH 6TH AVENUE
NORAVE	NORTH AVENUE
NORHWY	NORTH THORP HIGHWAY
NORPKY	NORTHERN STATE PARKWAY
NORTDR	NOTHWEST DRIVE
NORTWY	NORTH BEND WAY
NOWORD	NOWOOD ROAD
NPKY	NORTHERN PARKWAY
NRMNBR	NORMAN BRIDGE ROAD
NRTHAV	NORTH AVENUE
NRTHWY	NORTH HIGHWAY
NTHWY	NATIONAL TRAILS HIGHWAY
NUNNRD	NUNN ROAD
NVAST	NORTH VIRGINIA STREET
NW&WRT	NORTHERN WOOD & WATER ROUTE
NW6AVE	NW 6TH AVENUE
NWBYP	NORTHWEST BYPASS
NY -9B	NY-9B

NY AVE	NEW YORK AVENUE
NY-11B	NY ROUTE 11B
NY-11C	NY-11C
NY-12A	NY-12A
NY-12B	NY ROUTE 12B
NY-12D	NY-12D
NY-12E	NY-12E
NY-12F	NY12-F
NY-14A	NY ROUTE 14A
NY-15A	NY-15A
NY-17A	NY-17A
NY-17B	NY-17B
NY-17K	NY-17K
NY-22A	NY-22A
NY-23A	NY-23A
NY-23B	NY-23B
NY-25A	NY-25A
NY-25B	NY-25B
NY-28N	NY-28N
NY-29A	NY-29A
NY-30A	NY-30A
NY-31E	NY31E
NY-33A	NY-33A
NY-34B	NY-34B
NY-37B	NY-37B
NY-38A	NY-38A
NY-3A	NEW YORK ROUTE 3A
NY-41A	NY-41A
NY-5S	NY-5S
NY-7A	NY-7A
NY-96A	NY ROUTE 96A
NY-96B	NY-96B
NY-9A	NEW YORK ROUTE 9A
NY-9D	NY-9D
NY-9G	NY-9G
NY-9H	NY-9H
NY-9J	NY-9J
NY-9N	NY-9N
NY-9R	NY-9R
NY-9W	NY-9W
NY100C	NY100C
NY104A	NY104A
NY104B	NEW YORK ROUTE 104B
NY120A	120A WESTCHESTER CTY.
NY170A	NY170A

NY17C	NY17C
NY19A	NY19A
NY20C	NY20C
NY22B	NY22B
NY248A	NY RTE 248A
NY252A	NY252A
NY27A	NY-27A LAWN GUYLAND
NY28A	NEW YORK 28A
NY31A	NY31A
NY31C	NY31C
NY31F	NY31F
NY38B	NY38B
NY54A	NY54A
NY5A	NY-5A
NY5B	NY-5B
NY85A	NY-85A
NYTHRU	NEW YORK STATE THRUWAY
NZTPKY	NATCHEZ TRACE PARKWAY
OAK LN	OAK LANE
OAK ST	OAK STREET
OAKGLN	OAK GLEN ROAD
OAKHWY	OAKLAND-SHADY HIGHWAY
OBBRDG	OAKLAND BAY BRIDGE
OBPKWY	OCEAN BIKE PARKWAY
OCEAN	OCEAN ROAD
OCEANP	OCEAN PARKWAY
OCEAV	OCEAN AVE L.I.
OGDEST	OGDEN STREET
OGONTZ	OGONTZ AVENUE
OH14-F	OH14-F
OH4BYP	OH-4 BYPASS
OHRAMP	OH-2 ACCESS RAMP
OHTPK	OHIO TURNPIKE
OK- 3A	OK-3 ALTERNATE
OK- 5A	OK- 5A
OK- 5B	OK- 5B
OK- 5C	OK-5C
OK-10A	OK- 10 A
OK-11A	OK-11A
OK-28A	OK-28A
OK-31A	OK-31 A
OK-3E	OK-3E
OK-3E	RTE 3E
OK-3W	OK-3W
OK-48A	OK-48 A

OK-51A	OK-51 ALTERNATE ROUTE
OK-51B	OK-51 B
OK-59A	OK-59 A
OK-59B	OK-59 B
OK-7 A	OK-7 A
OK-70A	OK-70 A
OK-70E	OK-70 E
OK-74A	OK-74 ALTERNATE
OK-74B	OK-74 B
OK-74G	OK-74 G
OK-75A	OK-75 A
OK-77H	OK-77 H
OK-77S	OK-77 S
OK-9 A	OK-9 A
OK-99A	OK-99A
OK-99C	OK-99 C
OK-9A	OK-9A
OK251A	OK-251 A
OK271A	OK271A
OK9BUS	OK-9 BUSINESS ROUTE
OKGXWY	ORAN K GEORGE EXPWAY
OLCLRK	OLD CLARKSVILLE PIKE
OLD20	OLD RTE 20
OLDCOU	OLD COUNTY ROAD
OLDH99	OLD HIGHWAY 99
OLDLIN	OLD LINCOLN HIGHWAY
OLDMRD	OLD MINERAL SPRINGS ROAD
OLDPEC	OLD PECOS TRAIL
OLDPRD	OLD POST ROAD
OLDSAN	ANOLDSANANTONIO ROAD
OLDSUN	OLD SUNDANCE ROAD
OLDTAO	OLD TAOS HIGHWAY
OLDZRD	OLD ZEBULON ROAD
OLEEHY	OLD LEE HIGHWAY
OLHW80	OLD HIGHWAY 80
OLHY73	OLD STATE HIGHWAY 73
OLIVER	OLIVERS SHOP ROAD
OLUS61	OLD US-61
OLUS78	OLD US-78
OLUS84	OLD US-84
OLVRBL	OLIVER BELTZ ROAD
OLYMDR	OLYMPIA DRIVE
OLYORK	OLD YORK ROAD
ON-17B	ON-17B
ONECRD	ONECO ROAD

ONTAST	ONTARIO STREET
OR 42S	OREGON 42 S
OR 99E	OREGON 99 EAST
OR 99W	OREGON 99 WEST
OR AVE	OREGON AVENUE
OR126B	OR-126 BUSINESS ROUTE
OR99EB	OR-99E BUSINESS ROUTE
ORANGE	ORANGE STREET
ORCDRD	ORCHARD ROAD
ORCHRD	ORCHARD ROAD
ORLEAN	ORLEANS ROAD
ORLEST	ORLEANS STREET
OUTERB	OUTERBRIDGE CROSSING
OWENDA	OWENDALE ROAD
OWENST	OWEN STREET
OX RD	OX ROAD
OXFORD	OXFORD AVENUE
P100	PARK ROAD 100
P22	PARK ROAD 22
PA3004	CTY RD 3004
PA5ALT	PA 5 ALT
PACKER	PACKER AVENUE
PAGEML	PAGE MILL ROAD
PALARD	PALATINE ROAD
PALODR	PALOS VERDES DRIVE
PANEXT	NORTHEAST EXTN PATPK
PANMAP	ANAMA ROAD
PAOLI	PAOLI PIKE
PAPRML	PAPER MILL ROAD
PARADE	PARADE STREET
PARARD	PARADISE ROAD
PARKHL	PARK HALL ROAD
PARKRD	TETON PARK ROAD
PATAPS	PATAPSCO AVENUE
PATISN	PATTISON AVENUE
PATPK	PENNSYLVANNIA TURNPIKE
PAXST	PAXSTON ST HARRISBURG
PBDYRD	PEABODY ROAD
PCEBDG	PEACE BRIDGE
PDAMRD	PARKER DAM ROAD
PE-1A	PR ED ISL ROUTE 1A
PEACH	PEACH STREET
PEACRD	PEACE ROAD
PEACST	PEACHTREE STREET
PEARST	PEARL STREET

PECKHA	PECKHAM ROAD
PENAVE	PENN AVE
PENEXP	PENINSULA EXPRESSWAY
PENINB	DPENINSULA BLVD
PENNAV	PENNSYLVANIA AVENUE
PENNAV	PENNSYLVANIA AVENUE
PENVRD	PENOBSCOT VALLEY RD
PEOTON	PEOTONE ROAD
PERBVD	PERSHING BOULEVARD
PETPKY	PETERS CREEK PARKWAY
PHARRB	PHAR-REYOSA INT'L BRIDGE
PHARRB	PHAR-REYOSA INT'L BRIDGE
PHLMNT	PHILMONT AVENUE
PIBUTA	VPILOT BUTTE AVENUE
PIEDRD	PIEDMOUNT ROAD
PINBAY	PINELLAS BAYWAY
PINCON	PINCONNING ROAD
PINEST	PINE STREET
PITSAV	PITTSBURGH AVENUE
PITSTN	PITTSTON
PLBMLN	PLUMB LANE
PLEARD	PLEASANT ROAD
PLMEXP	PALMETTO EXPRESSWAY
PLMSTD	PLUMSTEAD AVENUE
PLOUGH	PLOUGH BOULEVARD
PLSNTV	PLEASANT VALLEY ROAD
PLSPKY	PISADES INTERSTATE PKWAY
PLUMST	PLUM STREET
PLYMWY	PLYMOUTH WAY
PNLVAL	PINOLE VALLEY ROAD
PNROSE	PENROSE AVENUE
PNYPKY	PENNYRILE PARKWAY
POLKRD	POLK ROAD
PORFRY	PORT CLINTON/PUT-IN-BAY
PORTAV	PORTER AVENUE
PORTRD	PORTLAND ROAD
PORTSP	SOUTH PORTLAND SPUR
POSTRD	POSTON ROAD
POSTRD	POST ROAD
POTTER	POTTER HILL ROAD
POWHWY	POWERS HIGHWAY
PRESA	PRESA AVENUE
PRIMOS	PRIMOS AVENUE
PRINRD	PRINCESS ANNE ROAD
PROSAV	PROSPECT AVENUE

PROSST	PROSPECT ST WALDWICK
PROVIN	PROVING GROUND ROAD
PROVRD	PROVINCIAL RD
PRSBYP	US 68 PARIS BYPASS
PRUDFY	PRUDENCE ISLAND FERRY
PRUESS	PRUESS ROAD
PRVDNC	PROVIDENCE ROAD
PTCTN	PONTCHARTRAIN CAUSEWAY
PTDFRY	PT DEFIANCE-TAHLEQUAH FERRY
PTJ-BI	PT JUDITH-BLOCK ISL FRY
PUDDRD	PUDDIN RIDGE ROAD
PULARD	PULASKI ROAD
PURPKY	PURCHASE PARKWAY
PURSMA	PURISIMA ROAD
QBRIDG	QUEENSTON-LWEISTON BRIDGE
QEW	ELIZABETH WAY
QUBLVD	QUINDARO BOULEVARD
QUEEN	QUEEN STREET
QUENRD	QUENTIN ROAD
QUITO	QUITO ROAD
R-NCON	ROCKY NECK CONNECTOR
RAINBB	RAINBOW BRIDGE
RALSTN	RALSTON AVENUE
RAMON	RAMON BOULEVARD
RAMP	ACCESS RAMP VAR. STATES
RAMP	I-76 ACCESS RAMP
RAMP	PONTCHARTRAIN CAUSEWY RAMP
RAMP	E/W TOLL ROAD EXIT RAMP
RAMP	I-395 ACCESS RAMP
RAMPI-	470 EXIT RAMP
RAMPI-	70 EXIT RAMP
RANCHO	RANCHO DRIVE
RANDRD	RANDALL ROAD
RANDRD	RAND ROAD
RANKIN	BRANKIN BRIDGE
RASBRD	RASBERRY ROAD
RDCTTR	RED COAT TRAIL
REDBAN	RED BANK EXPRESSWAY
RENWRD	RENWICK ROAD
RESERV	RESERVOIR ROAD
RESPKY	RESTON PARKWAY
REYNRD	REYNOLDS PARK ROAD
RI AVE	RHODE ISLAND AVENUE
RI-1A	RHODE ISLAND 1A
RI-6A	RHODE ISLAND 6A

RI138A	RHODE ISLAND 138A
RI146A	RHODE ISLAND 146A
RICEAV	RICE AVENUE
RICHAV	RICHLAND AVENUE
RICHDR	RICHARDSON DRIVE
RIDDRD	RIDDLE ROAD
RIDGAV	RIDGEWOOD AVE
RIDGEP	RIDGE PIKE
RIDGPK	RIDGE PIKE
RIDGRD	RIDGE ROAD
RIGGRD	RIGGS ROAD
RIPVAN	RIP VAN WINKLE BRIDGE
RIVARD	RIVA ROAD
RIVEBV	RIVERSIDE BOULEVARD
RIVER	RIVER STREET
RIVERD	RIVER ROAD
RIVERV	RIVERVIEW BOULEVARD
RIVRRD	RIVER ROAD
RMNDAV	RICHMOND AVENUE
RMNDPW	RICHMOND PARKWAY
RNBOW	RAINBOW BOULEVARD
RNRHWY	ROUGH AND READY HIGHWAY
ROBBIN	ROBBINS STREET
ROCKBD	ROCKAWAY BOULEVARD
ROCKPT	ROCK POINT ROAD
ROCKVI	ROCKVILLE ROAD
ROEAVE	ROE AVENUE
ROGELL	ROGELL DRIVE
ROGRD	ROGER ROAD
ROGTPK	WILL ROGERS TURNPIKE
ROOSRD	ROOSEVELT ROAD
ROSAMN	ROSAMOND BOULEVARD
ROSEMO	ROSEMONT ROAD
ROSERD	ROSELLE ROAD
ROSSO	ROSSO HIGHWAY
ROUTEA	COUNTY ROUTE A
ROUTEB	COUNTY ROUTE B
ROUTED	COUNTY ROUTE D
ROUTEE	COUNTY ROUTE E
ROUTEF	COUNTY ROUTE F
ROUTEH	COUNTY ROUTE H
ROUTEK	COUNTY ROUTE K
ROUTEM	COUNTY ROUTE M
ROUTEN	COUNTY ROUTE N
ROUTEO	COUNTY ROUTE O

ROUTEP	COUNTY ROUTE P
ROUTEY	COUNTY ROUTE Y
ROUTEZ	COUNTY ROUTE Z
RR DR	RAILROAD DRIVE
RS-LAF	ROARING SPR-LAFAYETTE RD
RSVLTB	ROOSEVELT BOULEVARD
RTE-BB	COUNTY ROUTE BB
RTE-EE	COUNTY ROUTE EE
RTE-KK	COUNTY ROUTE KK
RTE-OO	COUNTY ROUTE OO
RTE-TT	COUNTY ROUTE TT
RTG RD	RIDGE TOLLGATE ROAD
RYD RD	RYDER RD
S COMM	SOUTH COMMONS ROAD
S-18	CA LOCAL S-18
S-21	CA LOCAL S-21
S-6	CA LOCAL S-6
S-C RD	SASSAFRAS CALDWELL ROAD
S-F RD	STONEWALL-FRIERSON ROAD
S018ST	SOUTH 18TH STREET
S4A	COUNTY RTE S4A
S76A	STATE SPUR 76A
S77B	S77B
SACRAM	SACRAMENTO AVENUE
SAGERD	SAGE ROAD
SALINA	SALINAS ROAD
SANFRY	SANDUSKY/PELEE ISL FERRY
SANFRY	SANDUSKY/KELLEYS ISL FRY
SANGAV	SANGAMON AVENUE
SANMAT	SAN MATEO BOULEVARD
SANTOM	SAN TOMAS EXPRESSWAY
SARCTR	SARCEE TRAIL
SAWPKY	SAW MILL PARKWAY
SC-3BU	SC-3 BUSINESS ROUTE
SC151B	SC-151 BUSINESS ROUTE
SC28BP	SC-28 BYPASS
SC28BU	SC-28 BUSINESS
SC5BYP	SC-5 BYPASS
SC72BP	SC-72 BYPASS
SC97BU	SC-97 BUSINESS ROUTE
SC9BUS	SC-9 BUSINESS ROUTE
SC9BYP	SC-9 BYPASS
SCAPST	SOUTH CAPITOL STREET
SCARCO	SCARBOROUGH CONNECTOR
SCBLVD	SAM COOPER BOULEVARD

SCHRCH	SOUTH CHURCH AVENUE
SCTDAL	SCOTTSDALE ROAD
SD AVE	SOUTH DAKOTA AVENUE
SD1804	SOUTH DAKOTA ROUTE 1804
SD1806	SOUTH DAKOTA ROUTE 1806
SEA BR	SEAWAY INT BRIDGE
SEAFRY	SEATTLE-BAINBRDG ISL FRY
SEAFRY	SEATTTLE-BREMERTON FERRY
SEARRD	SEARINGTOWN ROAD
SEATON	SEATON STREET
SEAVIE	SEAVIEW AVENUE
SEBELT	SOUTHEASTERN BELTWAY
SECRTY	SECURITY BOULEVARD
SEDRVE	SOUTHEAST DRIVE
SEFRWY	SOUTHEAST FREEWAY
SEMIAV	SEMINARY AVE BALT
SENERD	SENECA ROAD
SEVEN	SEVEN MILE ROAD
SGKPKY	SAGTIKOS STATE PARKWAY
SGRIRD	SOUTH GRIFFIN ROAD
SGSEXP	SAWGRASS EXPWY.
SGUIGD	SOUTH GUIGNARD DRIVE
SHAGTR	SHAGANAPPI TRAIL
SHANCK	SHANNOCK ROAD
SHAWAN	SHAWAN ROAD
SHAWRD	SHAW ROAD
SHERMN	SHERMAN AVENUE
SHIEBV	SHIELDS BOULEVARD
SHILRD	SHILOH ROAD
SHLCRK	SHELL CREEK ROAD
SHORE	SHORE ROAD
SHPKWY	SAM HOUSTON PARKWAY
SHRIMP	SHRIMPERS ROW
SHRPKY	SHORE PARKWAY
SIBLVD	DIMOND BOULEVARD
SIERRA	SIERRA AVENUE
SILVRD	SILVERTON ROAD
SKFLY	SASKATO FLYWAY
SKHLRD	SKI HILL ROAD
SKYLND	SKYLINE DRIVE
SL1604	STATE LOOP 1604
SLEERD	SLEEPY HOLLOW ROAD
SLMNRD	SALMON RIVER ROAD
SMALWD	SMALLWOOD DRIVE
SMCCBD	SOUTH MCCARRAN BOULEVARD

SMCKTR	SEMCHUK TRAIL
SMITHF	SMITHFIELD BRIDGE
SMYRRD	SMYRNA ROAD
SNAKEH	SNAKE HILL ROAD
SNBRST	SUNBURST AVENUE
SNELL	SNELL ROAD
SNGRUN	SANG RUN ROAD
SNMRTN	SAN MARTIN AVENUE
SNPDRO	SAN PEDRO AVENUE
SOSMAN	SOSSAMAN ROAD
SOUBLV	SOUTH BLVD.
SOUFRY	SOUTHWORTH-FAUNTLEROY FERRY
SOUFRY	SOUTHCENTRAL FERRY
SOUFRY	SOUTHCENTRAL/SW FERRY
SOUFRY	SOUTHWEST FERRY
SOUNDA	SOUND AVENUE
SOUPKY	SOUTHERN STATE PARKWAY
SOUTH	SOUTH STREET
SOUTH	SOUTH AVENUE
SOUTRD	SOUTH MALIN ROAD
SOUTRD	SOUTH CARROLL ROAD
SOUTWY	SOUTH CLE ELUM WAY
SP AVE	SAN PABLO AVENUE
SP-136	SPUR US-136
SP-200	SP 200 MX
SP-244	SPUR TX-244
SP-277	SPUR US-277
SPBKPK	SPRAIN BROOK PARKWAY
SPBLVD	SAN PABLO BOULEVARD
SPENRD	SPENARD ROAD
SPERRY	SPERRY AVENUE
SPGTPK	SPAULDING TURNPIKE
SPOKST	SPOKANE STREET
SPOURD	SPOUT SPRINGS ROAD
SPR506	COUNTY 506 SPUR
SPR525	SPUR 525
SPR527	SPUR 527
SPR536	SPUR
SPRHWY	SPRINGFIELD-CRESWELL HIGHWAY
SPRIAV	SPRINGFIELD AVENUE
SPRING	SPRINGFIELD ROAD
SPRING	SPRING ROAD
SPRING	SPRING STREET
SPRNFD	SPRINGFIELD AVENUE
SPRUCE	SPRUCE STREET

SPRUST	SPRUCE STREET
SPSSRD	STEWARTS PT SKAGGS SPR ROAD
SPUR44	SPUR TO GNARLY DEATH AFB
SQHANA	SUSQUEHANNA STREET
SRCHRD	STONES RANCH RD
SSJ RD	SHANDON SAN JUAN ROAD
SSROAD	SUNNYVALE-SARATOGA ROAD
ST STR	STATE STREET
STALBN	ST ALBANS ROAD
STANIS	STANISLAUS ROAD
STAPLE	STAPLES AVENUE
STASTR	STATE STREET
STATE	STATE ROAD
STATE	STATE STREET
STATN	STATION AVENUE
STATRD	STATESVILLE ROAD
STATST	STATE ST-DOVER
STATST	STATE STREET
STCHRL	ST CHARLES PARKWAY
STCLRA	SANTA CLARA AVENUE
STEARD	STEARNS ROAD
STEAV	STATE AVENUE
STENTN	STENTON AVENUE
STEVDR	STEVENSON DRIVE
STEWRT	STEWART LANE
STHLND	SOUTHLAND DRIVE
STILAV	STILLWATER AVE
STJOSE	SAINT JOSEPH AVENUE
STNFRD	STANFORD AVENUE
STONAV	STONY ISLAND AVENUE
STONYP	STONY PLAIN ROAD
STPAUL	SAINT PAUL AVENUE
STROSA	SANTA ROSA CREEK ROAD
STUHR	STUHR ROAD
SUCCRD	SUCCOTASH ROAD
SUITPW	SUITLAND PARKWAY
SUMRVL	SUMMERVILLE ROAD
SUNBRG	SUNSHINE SKYWAY BRIDGE
SUNION	SOUTH UNION AVENUE
SUNPKY	SUNKEN MEADOW PKY LI
SUNSAV	SUNSET AVENUE
SUSQUE	SUSQUEHANNA STREET
SVAST	SOUTH VIRGINIA STREET
SVRDWY	SALT VALLEY ROADWAY
SYRBAR	SAWYERS BAR ROAD

TACPKY	TACONIC STATE PARKWAY
TAFTHW	TAFT HIGHWAY
TAKFRY	TAKU FERRY
TALAVE	TALLYRAND AVENUE
TALSCE	TALIMENA SCENIC DRIVE
TAPPAN	TAPPAN ZEE BRIDGE
TAYLOR	HARVEY TAYLOR BRIDGE
TEALAV	TEAL AVENUE, SYRACUSE
TECHDR	TECHWOOD DRIVE
TENTST	TENTH STREET
TERDR	TERRITORIAL DRIVE
TERHWY	TERRITORIAL HIGHWAY
TERRDR	TERRACE HILL DRIVE
TERRY	TERRY ROAD
THIELS	TTHIELSON STREET
THOAVE	THOMAS AVENUE
THOMRD	THOMAS ROAD
THORAV	ETHORNTON AVENUE
THORAV	THORNDALE AVENUE
THROGS	THROGS NECK BRIDGE
THRUEX	BERKSHIRE EXTENSION NY THRUWAY
TIGNRD	TIGNER ROAD
TILAVE	TILLSON AVENUE
TILGHM	TILGHMAN STREET
TILTRD	TILTON ROAD
TIMOAV	TIMONIUM AVE
TKUS19	TRUCK ROUTE US 19
TN-10S	TN-10 S
TN-22A	TN-22 ALTERNATE
TN-55B	BUSINESS TN-55
TN-69A	TN-69 ALTERNATE
TN-69B	BUSINESS TN-69
TN109B	TN-109 BYPASS
TN13SP	TN-13 SPUR
TN1BUS	BUSINESS TN-1
TN22BY	TN-22 BYPASS
TODBIS	TODDVILLE BISHOPS HEAD ROAD
TODDVL	TODDVILLE ROAD
TOKERD	TOKELAND ROAD
TOLBRG	OH-WV TOLL BRIDGE
TOLBRG	GREENSPRING TOLL BRIDGE
TOLERD	TOLEDO VADER ROAD
TOLLRD	TOLL ROAD
TOPAVE	TOPEKA AVENUE
TORRAV	TORRENCE AVENUE

TOUHAV	TOUHY AVENUE
TPBRDG	TACONY PALMYRA BRIDGE
TPINTG	FL TURNPIKE INTERCHG RAMP
TPKAVE	TURNPIKE AVE
TPKINT	TURNPIKE INTERCHANGE
TPRAMP	MASS. TURNPIKE ACCESS RAMP
TRACE	THE TRACE
TRC16X	TRANS-CANADA 16X
TRIBBR	TRIBOROUGH BRIDGE
TRINTY	TRINITY CHURCH ROAD
TRITOL	TRI-STATE TOLL ROAD
TRK1-9	TRK-1-9
TRK641	PA TRUCK RTE 641
TRK9	TRK RTE9
TRMEMB	T ROOSEVELT MEM BRIDGE
TRNTPK	TURNER TURNPIKE
TROUTB	TROUT BROOK DRIVE
TRPANA	TROPICANA AVENUE
TUCKER	TUCKER BOULEVARD
TUCKRD	TUCKER ROAD
TUDORD	TUDOR ROAD
TUNK-H	ATUNK-HANCOCK AVE
TUNNEL	DETROIT-WINDSOR TUNNEL
TWNCRK	TOWN CREEK ROAD
TWNSHP	TOWNSHIP LINE ROAD
TX-35B	BUSINESS TX-35
TX-36B	BUSINESS TX-36
TX-44B	BUSINESS TX-44
TX-6B	BUSINESS TX-6
TX-70B	BUSINESS TX-70
TX-71B	BUSINESS TX-71
TX123B	BUSINESS TX-123
TX158B	BUSINESS TX-158
TX208B	BUSINESS TX-208
TX288B	BUSINESS TX-288
U. AVE	UNIVERSITY AVENUE
UNION	UNION STREET
UNIONB	UNION BOULEVARD
UNIVAV	UNIVERSITY AVENUE
UNIVPK	UNIVERSITY PARKWAY
UNVPKY	UNIVERSITY PARKWAY
US-11A	US-11 ALTERNATE ROUTE
US-11E	US-11 EAST
US-11W	US-11 WEST
US-12B	BUSINESS US-12

US-13B	BUSINESS US-13
US-14A	US-14 ALTERNATE ROUTE
US-15B	BUSINESS US-15
US-16B	US-16 BYPASS
US-17B	US-17 BUSINESS ROUTE
US-19E	US-19 EAST
US-19W	US-19 WEST
US-1A	US ROUTE 1 ALTERNATE
US-2-A	US ROUTE 2A
US-20A	US ROUTE 20 ALTERNATE
US-25E	US-25 EAST
US-25W	US-25 WEST
US-29A	US-29 ALTERNATE ROUTE
US-31A	US-31 ALTERNATE
US-31E	US-31 EAST
US-31W	US-31 WEST
US-41A	US-41 ALTERNATE
US-41B	BUSINESS US-41
US-43B	BUSINESS US-43
US-45A	US-45 ALTERNATE
US-45B	BUSINESS US-45
US-45E	US-45 EAST
US-45W	US-45 WEST
US-49B	BUSINESS US-49
US-49E	US-49 EAST
US-49W	US-49 WEST
US-51B	BUSINESS US-51
US-51B	US ROUTE 51 BUSINESS
US-53B	BUSINESS US-53
US-59B	BUSINESS US-59
US-61B	BUSINESS US-61
US-62F	US-62F
US-63B	BUSINESS US-63
US-64A	US-64 ALTERNATE ROUTE
US-64B	BUSINESS US-64
US-65B	BUSINESS US-65
US-67B	BUSINESS US-67
US-69B	BUSINESS US-69
US-6N	US6N
US-70A	US-70 ALTERNATE ROUTE
US-70B	BUSINESS US-70
US-70S	US-70 SOUTH
US-71B	BUSINESS US-71
US-74A	ALTERNATE US-74
US-77B	BUSINESS US-77

US-79B	BUSINESS US-79
US-81B	BUS RTE US-81
US-82B	BUSINESS US-82
US-83B	BUSINESS US-83
US-84B	BUSINESS US-84
US-90A	US ROUTE 90A
US-90B	BUSINESS ROUTE US-90
US-9W	ROUTE US 9W
US101B	US-101 BUSINESS ROUTE
US119S	US-119 SPUR
US123B	US-123 BUSINESS
US127B	US-127 BYPASS
US129A	US-129 ALTERNATE ROUTE
US129B	US129 BYPASS
US13BU	US-13 BUSINESS ROUTE
US144B	US144 BYPASS
US14BS	BUSINESS US-14
US14BY	US-14 BYPASS
US14EX	US-14 EXTENSION
US150B	US-150 BYPASS
US151B	BUSINESS US-151
US151B	US-151 BUSINESS ROUTE
US158A	US-158 ALTERNATE ROUTE
US15BS	US-15 BUSINESS
US165B	BUSINESS US-165
US16BU	US-16 BUSINESS ROUTE
US178B	US-178 BYPASS
US17AL	US17 ALTERNATE ROUTE
US189B	US189 BUSINESS ROUTE
US190B	US-190 BUSINESS
US19BU	US-19 BUSINESS ROUTE
US1A	US1A
US1ABU	US-1A BUSINESS ROUTE
US1ALT	US-1 ALTERNATE ROUTE
US1BUS	BUSINESS US 1 & 9
US1BUS	US-1 BUSINESS ROUTE
US1BYP	US-1 BYPASS
US1CON	US1 CONNECTION
US209B	BUSINESS US 209
US20BS	BUSINESS ROUTE US-20
US20BU	US-20 BUSINESS ROUTE
US21BU	US-21 BUSINESS ROUTE
US21CN	US-21 CONNECTOR
US220A	US 220 A
US221B	US-221 BYPASS

US222B	US222 BUSINESS
US22BS	BUS US 22
US23BU	US-23 BUSINESS ROUTE
US23SP	US-23 SPUR
US24BU	US-24 BUSINESS ROUTE
US25BP	US-25 BYPASS
US25BU	US-25 BUSINESS ROUTE
US25CN	US-25 CONNECTOR
US26BS	BUSINESS ROUTE US-26
US26BU	US26 BUSINESS ROUTE
US26BY	US-26 BYPASS
US270B	BUSINESS US-270
US271B	BUSINESS US-271
US277B	BUSINESS US-277
US278B	US278 BYPASS
US27BU	US-27 BUSINESS ROUTE
US281A	ALTERNATE US-281
US281W	US-281WEST
US287B	US-287 BYPASS
US290B	BUSINESS US-290
US29BU	US-29 BUSINESS ROUTE
US2BUS	US-2 BUSINESS ROUTE
US301B	US-301 STATESBORO BYPASS
US301B	US-301 BUSINESS ROUTE
US30BS	US-30 BUSINESS ROUTE
US30BY	US-30 BYPASS
US30SP	US-30 SPUR
US319B	US-319 BUSINESS ROUTE
US31BU	US-31 BUSINESS ROUTE
US321B	US-321 BUSINESS ROUTE
US322B	US-322 BUSINESS
US34BU	US-34 BUSINESS ROUTE
US35BP	US-35 BYPASS
US36BU	US-36 BUSINESS ROUTE
US401B	US-401 BUSINESS ROUTE
US40BU	US-40 BUSINESS ROUTE
US41BS	BUSINESS US-41
US41BU	US 41 BUSINESS ROUTE
US422B	US 422 BUSINESS
US43BU	US-34 BUSINESS OFFRAMP
US441B	US-441 BUSINESS ROUTE
US45WB	BUSINESS US-45 WEST
US501B	US-501 BUSINESS ROUTE
US50BU	US-50 BUSINESS ROUTE
US50CN	US-50 CONNECTOR

US51BU	US-51 BUSINESS ROUTE
US51CN	US-51 CONNECTOR
US521B	US-521 BYPASS
US52BU	US-52 BUSINESS ROUTE
US52CN	US-52 CONNECTOR
US54BU	US-54 BUSINESS ROUTE
US56BU	US-56 BUSINESS ROUTE
US60AL	US-60 ALTERNATE
US60BU	US-60 BUSINESS ROUTE
US61BU	US-61 BUSINESS ROUTE
US62BU	US-62 BUSINESS ROUTE
US63BU	US-63 BUSINESS ROUTE
US641B	BUSINESS US-641
US64BU	US-64 BUSINESS ROUTE
US64BY	US-64 BYPASS
US67BU	US-67 BUSINESS ROUTE
US69BU	US-69 BUSINESS ROUTE
US6BUS	BUSINESS US 6
US6SPR	US-6 SPUR
US701B	US-701 BUSINESS ROUTE
US70AB	BUSINESS US-70 ALTERNATE
US70BU	US-70 BUSINESS ROUTE
US70CN	US-70 CONNECTOR
US70N	US70 NORTH
US71SP	SPUR US-71
US74BU	US-74 BUSINESS ROUTE
US75BU	US-75 BUS
US76BP	US-76 BYPASS
US76BU	US-76 BUSINESS ROUTE
US78BU	US78 BUSINESS ROUTE
US81BU	US 81 BUSINESS ROUTE
US82BU	US-82 BUSINESS ROUTE
US83BU	US-83 BUSINESS ROUTE
US83BY	US-83 BYPASS
US84BU	US-84 BUSINESS ROUTE
US85BU	US-85 BUSINESS ROUTE
US87BU	US-87 BUSINESS ROUTE
US90AL	US-90 ALTERNATE
US90BU	US-90 BUSINESS ROUTE
US95SP	US-95 SPUR
US97BU	US-97 BUSINESS ROUTE
US9BUS	US-9 BUSINESS ROUTE
USFSRD	USFS ROAD
UTRAIL	UTAH TRAIL ROAD
VA168B	VA-168 BUSINESS ROUTE

VA205Y	VA-205 Y
VA7BUS	VA-7 BUSINESS ROUTE
VALFRG	VALLEY FORGE ROAD
VANESS	VAN NESS AVENUE
VASHWY	VASHON HIGHWAY
VAUFRY	VAUSHON-SOUTHWORTH FERRY
VERRNB	VERRAZZANO NARROWS BRIDGE
VETERN	VETERANS MEMORIAL BRIDGE
VFWPKY	VETS OF FOREIGN WARS PKWY
VHC RD	VIENNA HENRYS CROSSRDS ROAD
VICTOR	VICTORY HWY
VNTURA	VENTURA ROAD
VSTAVE	VISTA AVENUE
VT 15A	VERMONT 15A
VT 2A	VERMONT 2A
VT-22A	VERMONT 22A
VT-7A	VERMONT ROUTE 7A
VT100A	VERMONT 100A
VT100C	VERMONT 100C
VT104A	VERMONT 104A
VT25B	VERMONT 25B
VT4A	VERMONT 4A
VT5A	VERMONT 5A
VT67A	VERMONT 67A
VT8A	VERMONT 8A
W 5TH	WEST FIFTH STREET
W38ST	WEST 38TH STREET
W5THST	WEST 5TH STREET
WABAAV	WABASH AVENUE
WACKDR	WACKER DRIVE
WADEAV	WADE AVE EXTENTION
WADERD	WADE ROAD
WALKER	WALKER STREET
WALKRD	WALKER RD
WALLST	WALL STREET
WALNUT	WALNUT STREET
WAMPAN	WAMPANOAG TRAIL
WARAVE	WARNER AVENUE
WARSRD	WARSAW ROAD
WASHAV	WASHINGTON AVENUE
WASHBD	WASHINGTON BOULEVARD
WASHLN	WASHINGTON LANE
WASHST	WASHINGTON STREET
WATCHL	WATCH HILL ROAD
WATER	WATER STREET

WATRMN	WATERMAN AVENUE
WAYNE	WAYNE AVENUE
WCAPST	WEST CAPITOL STREET
WCHSTR	WEST CHESTER PIKE
WCHWY	WILBUR CROSS HIGHWAY
WCPKY	WILBUR CROSS PARKWAY
WDADEX	WEST DADE EXPRESSWAY
WDODGE	WEST DODGE ROAD
WEBERD	WEBER ROAD
WENDBR	WEST END BRIDGE
WESLDR	WESLEY DRIVE
WESLEY	WESLEY CHURCH ROAD
WESTAR	WESTBROOK ARTERIAL
WESTAV	WESTERN AVENUE
WESTBD	WEST GALENA BOULEVARD
WESTBY	WEST BYPASS
WESTER	WESTERN AVENUE
WESTRD	WEST VALLEY VIEW ROAD
WESTRD	WEST PACES FERRY ROAD
WESTST	WEST STREET
WEVACO	WESTVACO ROAD
WHARF	WHARF ROAD
WHBLVD	WHITTIER BOULEVARD
WHEARD	WHEATON ROAD
WHEEL	WHEEL ROAD
WHITES	WHITESTONE BRIDGE
WHITFY	WHITEHURST FREEWAY
WHITRD	WHITE OAK ROAD
WHTCTR	WHEATLAND CENTER RD
WILBAR	WILKES-BARRE BLVD
WILHWY	WILSONVILE-HUBBARD HWY
WILKEN	WILKENS AVENUE
WILLAV	WILLINGTON AVE VANCOUVER
WILLBR	WILLIAMSBURG BRIDGE
WILLIS	WILLIS STILL ROAD
WILLMS	WILLIAMS ROAD
WILLOW	WILLOW STREET
WILLRD	WILLOW ROAD
WILSON	WILSON AVENUE
WILSRD	WILSON ROAD
WINDAV	WIND GAP AVE
WINDRD	WIND RIVER ROAD
WINGAT	WINGATE ROAD
WINNPR	DWINNAPAUG ROAD
WISCAV	WISCONSIN AVENUE

WKYPKY	WESTERN KENTUCKY PARKWAY
WLDNAV	WALDEN AVE BUFFALO
WLEWIS	WEST LEWIS STREET
WNJTPK	WESTERN SPUR NJ TPK
WODLND	WOODLAND AVENUE
WOODRD	WOOD ROAD
WOODSH	WOODSHOLE ROAD
WOODVL	WOODVILLE ROAD
WRIGAV	WRIGHTSVILLE AVENUE
WRMSPG	WARM SPRING AVENUE
WRMSPR	WARM SPRINGS ROAD
WTHPKY	WANTAUGH PARKWAY LI
WTLORD	WATERLOO ROAD
WTMDTR	WHITEMUD TRAIL
WTWNST	WEST TOWN STREET
WV-10A	WV-10ALTERNATE
WV-25A	WV-25 ALTERNATE
WV-72A	WV-72 ALTERNATE
WV1056	WEST VIRGINIA 1056
WVTPK	WEST VIRGINIA TURNPIKE
WW AVE	WOODROW WILSON AVENUE
WWBRDG	WALT WHITMAN BRIDGE
WWHITN	WEST WHITNER ST
WY'ERD	WY'EAST ROAD
WYBLVD	WYOMING BOULEVARD
WYMEMB	WHITNEY YOUNG MEMORIAL BRIDGE
WYTEAV	WHYTE AVENUE
XCANYN	CROSS CANYONS ROAD
XRP35	EXIT RAMP 35
YAKHWY	YAKIMA VALLEY HIGHWAY
YLH-16	YELLOW HEAD-16
YLH-5	YELLOW HEAD-5
YLH16A	YELLOWHEAD RT TRANS CANADA A
YLH16B	YELLOWHEAD RT TRANS CANADA B
YORKAV	YORK AVE
YORKRD	YORK ROAD
YUCAPA	YUCAIPA BOULEVARD
ZIMMRD	ZIMMERLY ROAD

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